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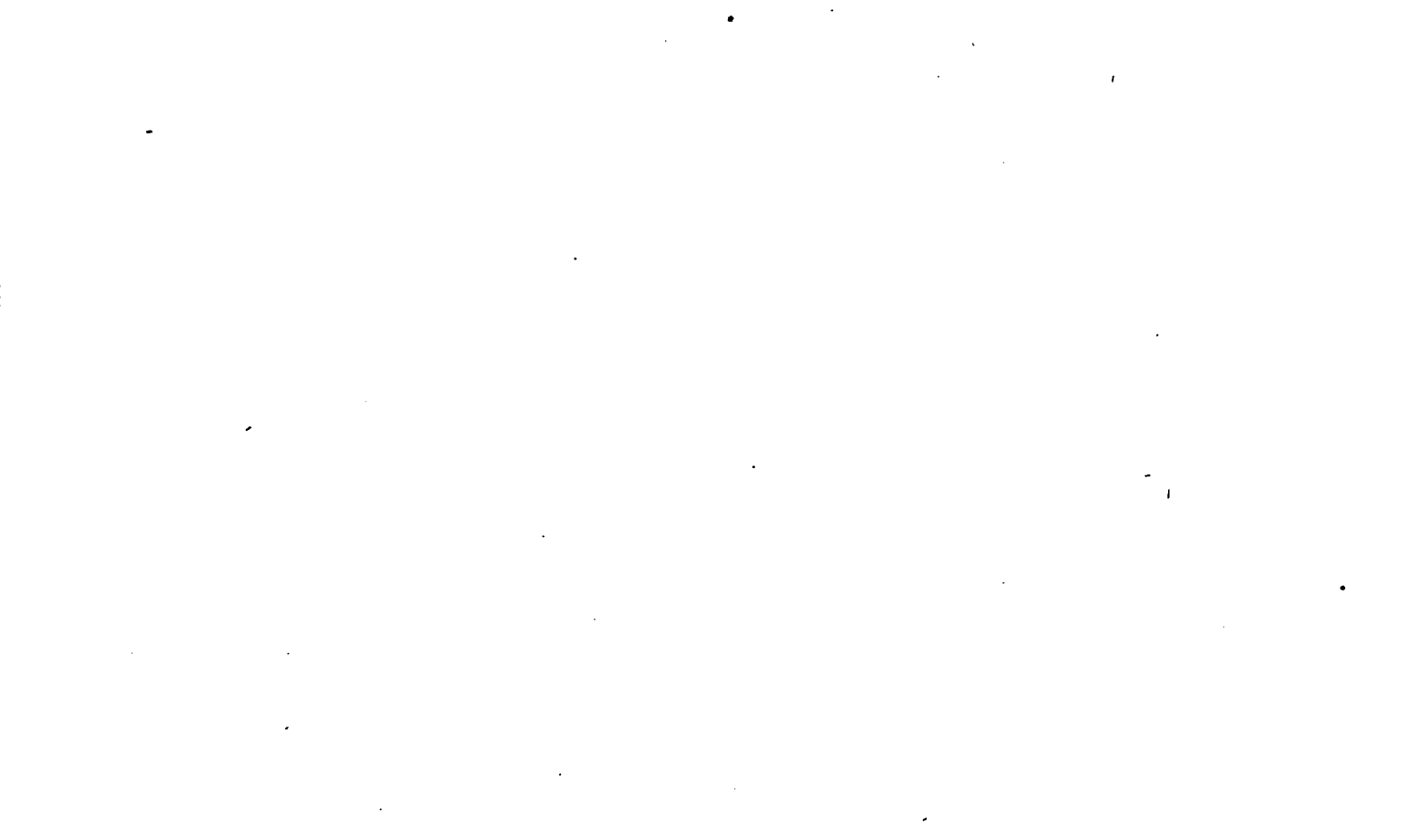
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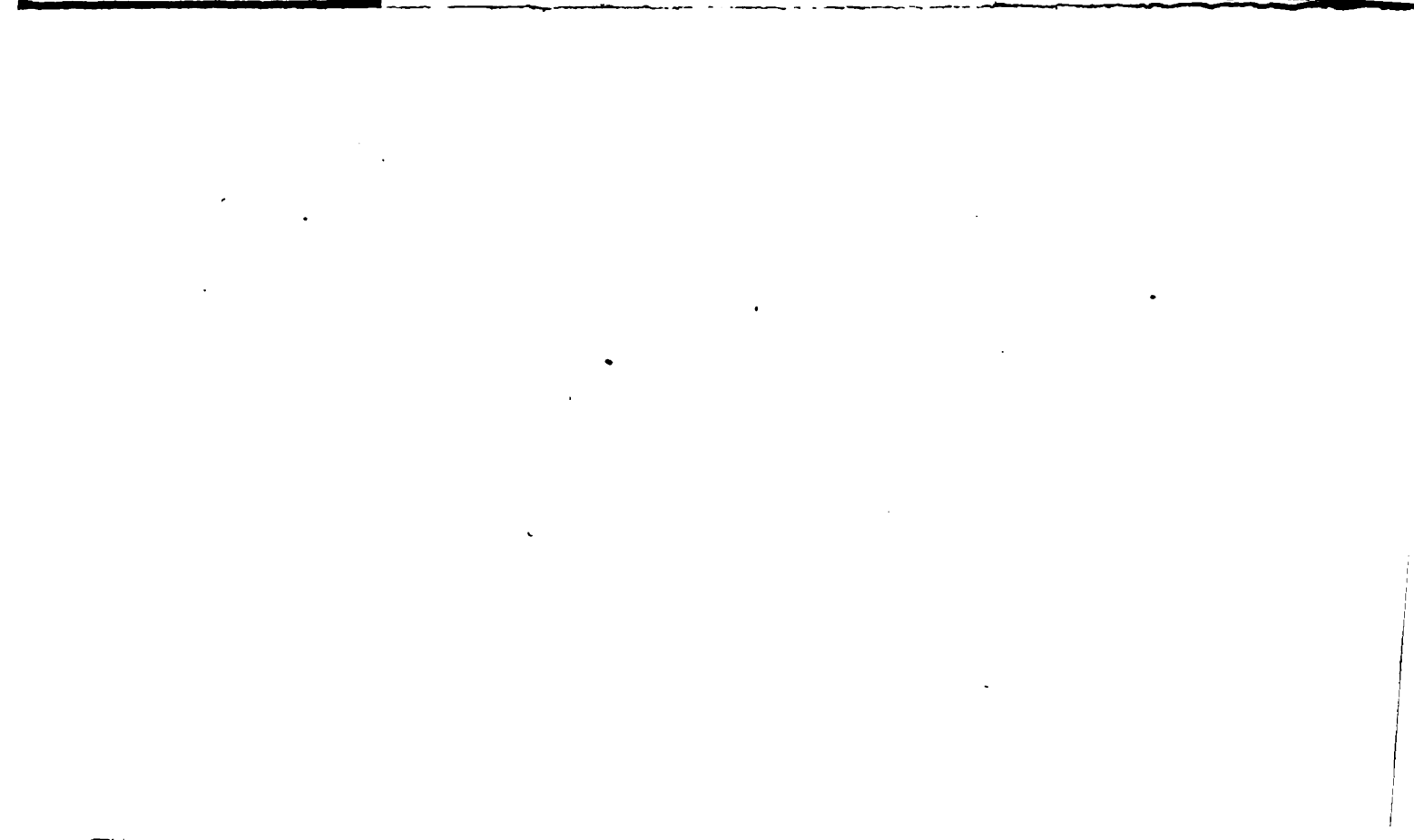
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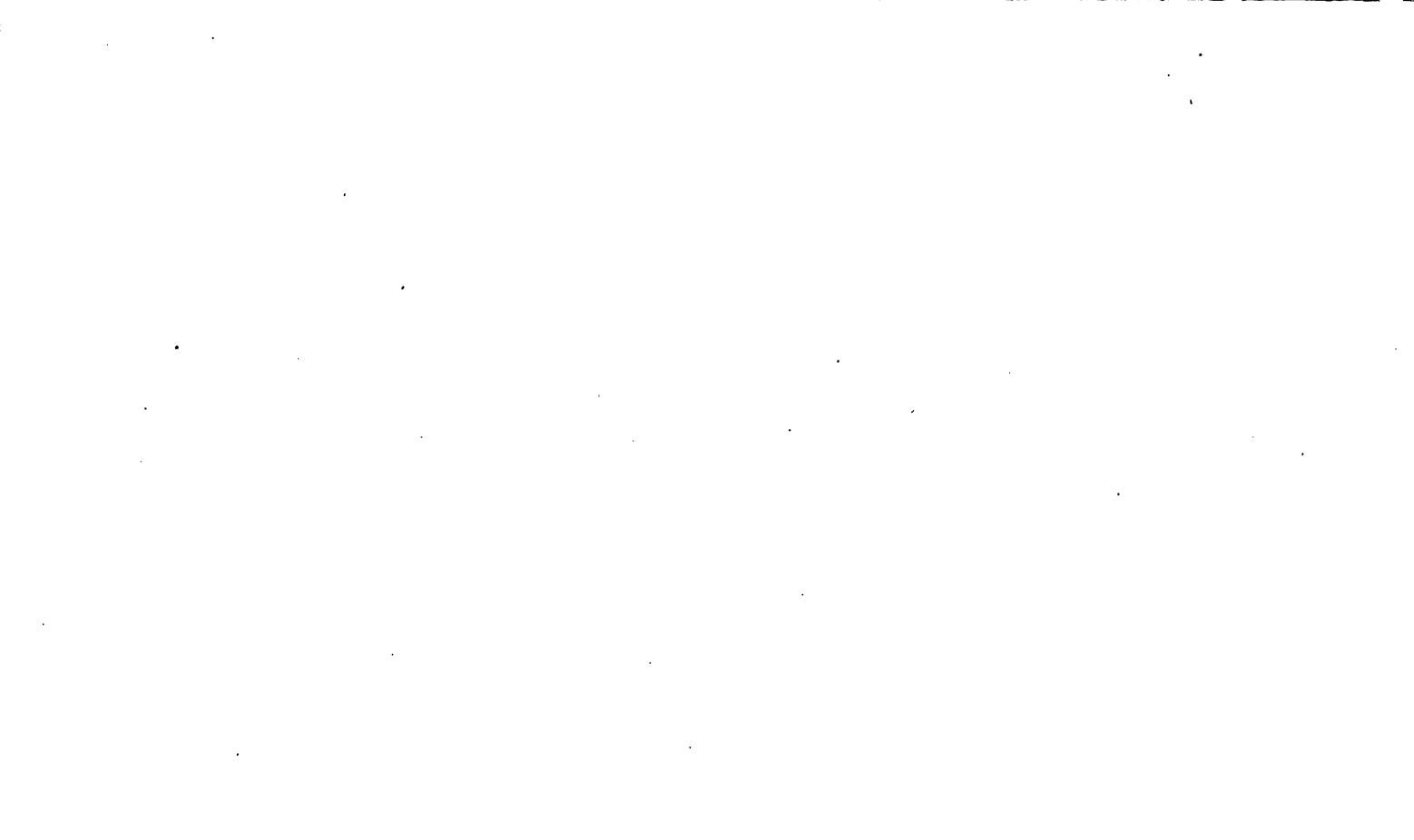
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CATALOGUE AND PRICE LIST  
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CHAPMAN VALVE MANUFACTURING COMPANY  
INDIAN ORCHARD, MASS.  
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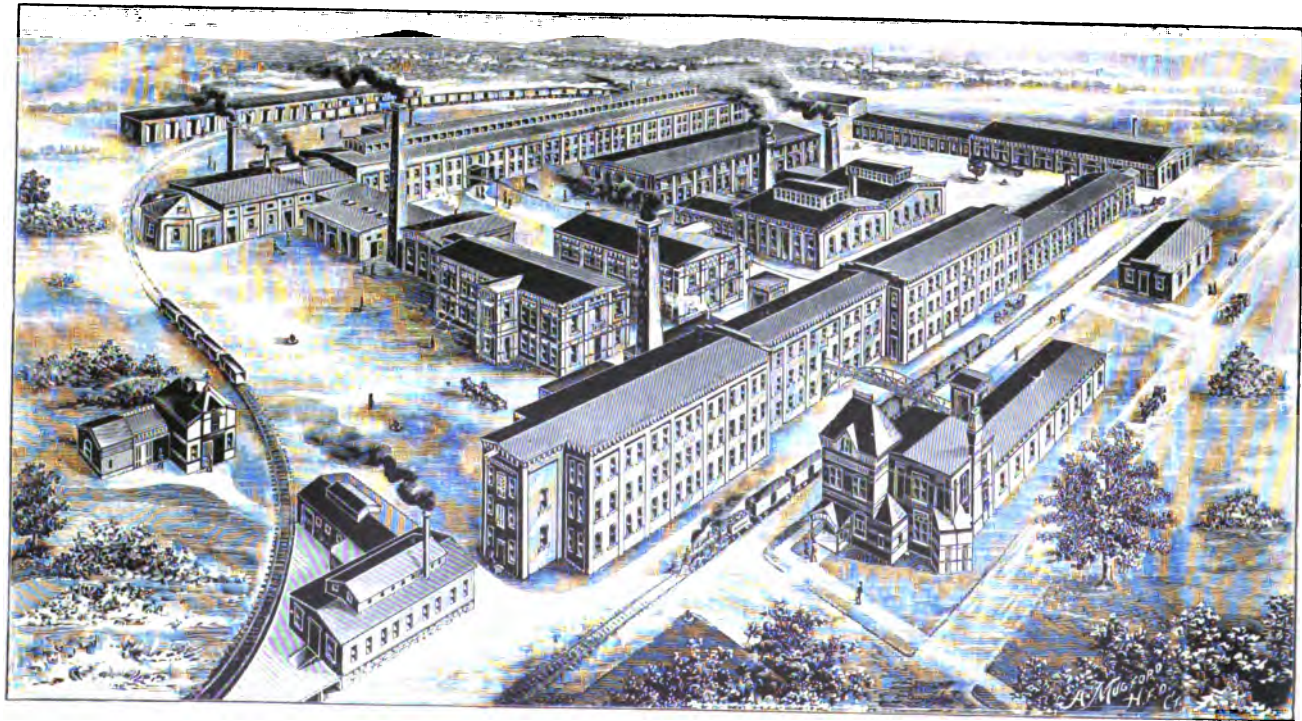
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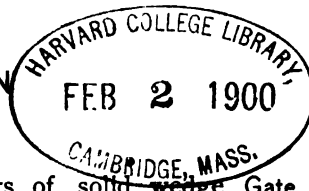
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WORKS OF THE CHAPMAN VALVE MANUFACTURING CO., INDIAN ORCHARD, MASS.

## INTRODUCTION



PRODUCT We are the largest and oldest manufacturers of solid wedge Gate Valves in the United States and our shops are now the most thoroughly equipped establishment in existence devoted to the manufacture of valves. Our product consists of valves and fire-hydrants (and their accessories) for all purposes and pressures and in all sizes; it is of the highest class throughout and is recognized as STANDARD for excellence of DESIGN, MATERIAL and WORKMANSHIP. Our valves and fire-hydrants have been and are used extensively by the best designers and constructors. They can not be excelled in QUALITY, FINISH AND DURABILITY.

REGULAR VALVES In the following pages will be found descriptions, price lists and dimension sheets of the regular lines of Chapman Valves, Fire Hydrants and their accessories. Owing to the rapid growth of our product during recent years, it has been found advisable to re-arrange and extend certain of the tables and to add many new ones. In former editions of our catalogue, valves and hydrants were designated and identified by Table Number. To avoid confusion on the part of purchasers accustomed to these former editions, due to the re-arrangement and re-numbering of the tables, we have employed in this edition the term List Number to designate the different kinds of valves and have placed on each List the former Table Number so that valves may be ordered indiscriminately by Table Number or by List Number without fear of error or misunderstanding. The list prices and discounts are new, so that former discounts are not applicable to the following lists, nor present discounts to former lists.

ARRANGEMENT It is believed that the present arrangement will be found both clear and concise. The various lists are arranged in sections according to the kinds of valves, as follows:

CONTENTS	SECTION	I.—Bronze Gate Valves with Bronze or Babbitt Seats—for Steam, Water, Air and Acids.
	SECTION	II.—Iron Body Gate Valves with Babbitt Seats and Bronze Mountings—for Water, Steam and Oil.
	SECTION	III.—Iron Body Gate Valves with Removable Bronze Seats and Bronze Mountings—for High Temperature Steam and Water.
	SECTION	IV.—Iron and Semi-Steel Gate Valves with Babbitt or Iron Seats and Iron or Steel Mountings—for Gas, Oil, Ammonia and Alkalies.
	SECTION	V.—Companion Flanges for Chapman Valves.
	SECTION	VI.—Indicator Attachments, Indicator Posts, Floor Stands, Gearing and Gear Covers.
	SECTION	VII.—Post, Flush and Roof Fire-Hydrants.
	SECTION	VIII.—Sluice Gates.
	SECTION	IX.—Instructions for Ordering—Repairs, etc.
	SECTION	X.—Dimension Sheets of Gate Valves.
	SECTION	XI.—General Recommendations Concerning the Selection of Valves.

The lists in each section range upward from low pressures and small sizes to high pressures and large sizes. Illustrations and detailed descriptions accompany each list. A complete alphabetical index will be found at the end of the book.

#### ORDERING

Instructions for ordering will be found in Section IX.

#### SPECIAL FEATURES

We call especial attention to the fact that in each list we have mentioned several purposes for which the valves are suitable and have given the working pressure which the valves may be expected to stand in ordinary service. In many cases the choice of a valve will not be governed by the pressure alone, but will be influenced or governed entirely by local conditions, such as water-hammer, expansion and contraction, stresses due to connecting pipes, etc. In every case the pressures given are well within the safe capacity of the valve and a factor of safety amply

#### WORKING PRESSURES

large to cover the ordinary stresses of the service has been allowed. Special cases, either of unusually easy or severe service, demand special treatment and upon receipt of data covering the conditions, we shall be pleased to quote upon valves suitable for the work.

RECOMMEN-  
DATIONS

As a further aid to purchasers in selecting valves, we have given in Section XI some General Recommendations based upon our extensive experience in this class of work. The recommendations are grouped under the several types of plants, as STEAM POWER PLANTS, WATER WORKS SYSTEMS, GAS PLANTS, REFRIGERATING PLANTS, ETC. This feature is an entirely new departure in the catalogue line, and no pains have been spared to make it of maximum value to intending purchasers.

SPECIAL  
VALVES

In addition to our regular product herein listed, we make many other valves, etc., for special work and are constantly adding to our stock of patterns to keep pace with the best modern practice. We shall be pleased to submit designs and prices for valves for any purpose or pressure not listed, or of any other metal or sizes desired.

Users will find it economical to conform to our regular patterns of valves and hydrants wherever possible. In many cases a slight change from the regular pattern will make a material addition to the cost and delay the time of shipment. Such changes usually require more or less special pattern work and destroy the advantage ordinarily gained by the use of special machinery, jigs, templates, drillheads, etc.

STOCK

We aim to carry at our works a complete stock of valves, hydrants, etc., for ordinary purposes and of sizes in general use, and can make prompt shipment. Stocks of our goods are also carried at our agencies and by supply dealers in the prominent cities.

JAN 1, 1900

CHAPMAN VALVE MANUFACTURING COMPANY



## GENERAL DESCRIPTION OF CHAPMAN GATE VALVES

### GENERAL DESIGN

The Chapman Gate Valves are of the **DOUBLE-FACED SOLID WEDGE PLUG** type and have a straightway passage the full diameter of the connecting pipe. This is the simplest and strongest design for the purpose; it requires the smallest number of working parts and offers the least resistance to the passage of the fluid. They are made in all sizes from  $\frac{1}{4}$  inch upward, in both straight and angle pattern, for all kinds of liquids and gases, for any pressure desired and of materials best adapted to resist the action of the substances to be held.

### SIZES AND PRESSURES

The gate or plug is in **ONE PIECE**, made wedge-shaped or tapering, heavily braced or ribbed, and closes vertically between two inclined seats or surfaces in the body. To ensure perfect alignment with the spindle the plug is guided by ribs or splines in the body which engage with grooves in the edges of the plug and prevent it from turning, coming into contact with its seats or chattering while opening or closing. These ribs are of unequal width to prevent the plug from being inserted wrongly after removal for repairs or otherwise.

The plug is double faced and with the single exception of the Automatic Drip Valves, in Lists Nos. 9 and 27, **EITHER END OF THE VALVES MAY BE USED FOR INLET OR OUTLET.**

### SHELL

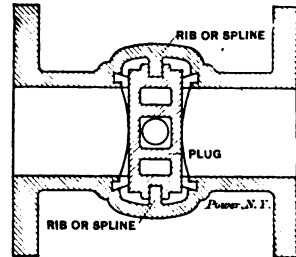
The shell is made in two pieces, the Body and the Cap, put together with screw joint or with bolted flange joint. In the first case, valves are called **SCREW TOP VALVES**; in the second, **BOLT TOP VALVES**.

### ENDS

The ends of the valves may have flange, screw, bell, spigot or union connections, or any combination of these, as desired. Screw ends are recessed to prevent the pipe from bottoming and have **AMERICAN OR BRIGGS STANDARD PIPE THREADS** unless otherwise ordered; **ENGLISH THREADS** furnished when required.

### INSIDE SCREW VALVES

With reference to the main spindle, valves are of two kinds, viz., **INSIDE SCREW** or stationary spindle valves and **OUTSIDE SCREW** or rising spindle valves. In the Inside Screw Valves the spindle revolves but does not rise, being held vertically by the thrust collar C, Figs. 2, 3 and 6. The plug rises and falls on



GENERAL SECTIONAL PLAN  
SHOWING  
METHOD OF GUIDING PLUG

FIG. 1.

the spindle, its upper portion being threaded to form a nut for the screw on the lower end of the spindle. The thrust collar is held between two immovable metal faces, thus avoiding any tendency to cramp the spindle in the stuffing box. The operating screw of these valves is entirely inside the valve body and cap.

**OUTSIDE  
SCREW  
VALVES**

In the Outside Screw Valves the upper end of the spindle is threaded and the spindle is operated by a revolving nut (N, Figs. 4 and 5), held vertically in the yoke Y by the two collars shown and turned by the handwheel, which is fastened to it. The spindle rises WITHOUT REVOLVING and the plug, being fastened to the lower end of the spindle, rises with it. The operating screw of these valves is entirely outside the valve body where it can be inspected and oiled. The wheel is STATIONARY VERTICALLY and the rising spindle forms the best possible INDICATOR, requiring no intermediate mechanism. The projection of the spindle through the yoke nut and wheel shows the number of inches the plug has risen.

**SEATING**

In both Inside Screw and Outside Screw valves a sufficient amount of play is left in the connection between the spindle and plug to allow the plug to seat truly without cramping the spindle.

**SELF-PACKING  
FEATURES**

ALL OUTSIDE SCREW VALVES WITH BRONZE SEATS and the HEAVY PRESSURE OUTSIDE SCREW VALVES WITH BABBITT SEATS have the Chapman Self-Packing feature, which allows the stuffing box to be repacked while the valve is open and under pressure. This device consists of a spherical collar (K, Figs. 4 and 5) on the spindle which closes against a finished seat S in the cap WHEN THE VALVE IS WIDE OPEN as in Fig. 4 and prevents the escape of steam and water. This collar is made a part of the spindle, leaving only a single seat to be kept tight and the play in the connection of the spindle and plug allows the packing collar to seat truly against the cap.

The design of our INSIDE SCREW VALVES is such that, for all practical purposes, they are also self-packing. When the plug is drawn up TIGHTLY against the cap as in Fig. 3, the finished thrust collar C seats itself against the finished bottom surface of the recess in the cap and effectually prevents the escape of steam and water into the stuffing box.

We use three kinds of seats, viz., SOLID SEATS, BABBITT METAL SEATS and REMOVABLE BRONZE SEATS.

**SOLID  
SEATS**

The Solid or Integral Seats are formed on the body of the valve as shown in Fig. 2, and are of the same material as the valve body. They are used on bronze valves for high temperatures and on iron valves for hot gases, extra strong solutions of alkalies, etc.

**BABBITT  
SEATS**

Babbitt Seats, Fig. 3, are used on valves for all purposes except very strong alkalies and substances under very high temperatures, such as high pressure steam, etc. They are composed of a hard, durable alloy which should not be confounded with the anti-friction metal of the same name. We use different

alloys for different purposes, as STEAM, WATER, GAS AND AMMONIA, HIGH PRESSURE STEAM, ETC. All of these alloys are made uniformly, have been tested thoroughly and are perfectly reliable for the several purposes. They are suitable for a working temperature of 325 degrees Fahrenheit, which corresponds to saturated steam of 80 pounds gauge pressure. We do not recommend them for superheated steam nor for any service where the temperature exceeds 325 degrees Fahrenheit. The seats are securely and firmly held to the body by dovetailed grooves and are formed upon the plug itself, thus producing an exact counterpart of the plug faces and making a perfect joint.

These seats are used in connection with plugs having faces of a different metal and they will not oxidize or corrode, so that the plug will always start easily from its seats, irrespective of the time the valve has been closed. They will stand the hardest of service and can be readily repaired or renewed when injured.

#### REMOVABLE BRONZE SEATS

For use with saturated or superheated steam under high pressures or temperatures and for certain acids, we recommend the Chapman Removable Bronze Seats, Figure 5. These seats are made of hard GUN METAL BRONZE for steam and of other compositions for acids. They are INTERCHANGEABLE AND RENEWABLE. They are screwed into the body AT RIGHT ANGLES TO THE TAPER FACES OF THE PLUG and the joint between the seat ring and the body is made by a finished shoulder against which the ring bears. This makes a perfectly steam tight joint, irrespective of the thread. These rings will not become loose after repeated expansion and contraction, and they are the most satisfactory removable seats on the market. If injured by chips or scale they may be removed and refaced, or replaced by new ones.

#### PLUG FACES

The faces of the plug are formed of the material of the plug itself or of a different metal (usually bronze) cast into dovetailed grooves in the plug, as in Figures 5 and 17, and thoroughly peened after pouring to ensure perfect density of the metal, as shown by Figure 18. The faces are accurately finished by special machinery to the exact taper of the seats.

#### SPINDLES

The spindles are of specially tough bronze or of the best wrought iron or steel, according to requirements. They are of large diameter to prevent twisting, are made true to size and have the most approved form of thread. Iron and steel spindles for gas and steam are tinned above the thrust collar to prevent corrosion.

#### STUFFING BOXES

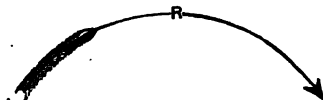
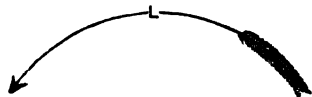
The stuffing-boxes are large and deep and are of the Screw Packing Nut, Driving Gland and Bolt Follower types, best adapted to the several kinds of work.

## WHEELS, ETC.

Any of our valves can be furnished with handwheel, T head or nut on the spindle, or with gearing, as desired.

## DIRECTION TO OPEN

Unless otherwise ordered, all Bell and Spigot End Water Valves, both plain and geared, and all Hydrants will turn to RIGHT TO OPEN. All other valves will turn to LEFT TO OPEN. The latter is preferable in all cases. To prevent mistakes in operating, all valves and hydrants made by us are marked prominently with an arrow and the initial letter R or L, showing the direction to turn to open, as shown below.



## TURNS TO OPEN

Special attention has been given to this point and we believe that, pressure and other requirements considered, the regular Chapman valves are properly proportioned in this respect. To suit special cases we can arrange the valves to open more rapidly or slowly than the regular valves.

## STEM AND LEVER

For use under moderate pressure where a quick motion is desirable and the water hammer caused by it will do no harm, we can fit valves 12 inches and smaller with the Sliding Stem and Lever, shown in Fig. 10. They are opened and closed by one movement of the lever and can be locked in any position by the binder wheel.

## QUICK THREAD BY-PASS

For quick opening we recommend the use of a special thread on the spindle. This thread gives a uniform and rapid motion of the plug and can be made to give almost any desired rapidity of movement.

For use in filling long lines of pipe, in equalizing the pressure on both sides of a valve before opening or in warming up cold cylinders, pipes, etc., we furnish the larger sizes of our valves with a substantial by-pass of proper size, which engages with the body on each side of the plug. The by-pass valve has inside or outside screw to match the main valve.

## MATERIALS

All metals used are the best of their respective kinds and are made in our own foundries by skilled workmen.

## PATTERNS

All of our patterns are especially designed to avoid shrinkage or drawing stresses tending to produce

spongy places in the castings and are kept in the best of repair. This, in combination with the metals used, ensures clean, smooth castings of uniform quality and workmanlike finish.

**MACHINERY**

**AND**

**WORKMANSHIP**

Our shops are fitted with the most modern and improved machinery, most of which is especially designed for our work. All parts of the valves are made to steel gauges and templates and, to a large extent, are perfectly interchangeable. **THE WORKMANSHIP IS OF THE BEST IN EVERY PARTICULAR.**

**TESTING**

Before leaving the works, every valve is tested, both open and closed, under a pressure sufficient to ensure its tightness under all working conditions.

**DETAILED**

**DESCRIPTION**

Several views of typical valves are shown on the following pages. Various other combinations of the several parts are made to suit conditions. Illustrated descriptions of the different valves will be found in the text accompanying each price list.

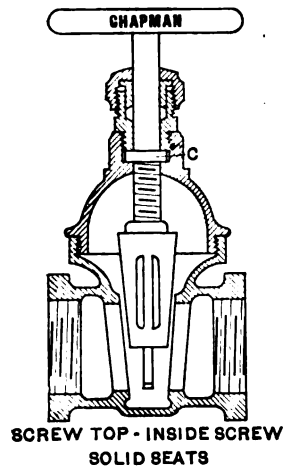


FIG. 2

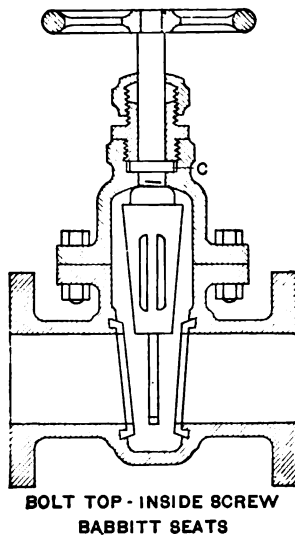


FIG. 3

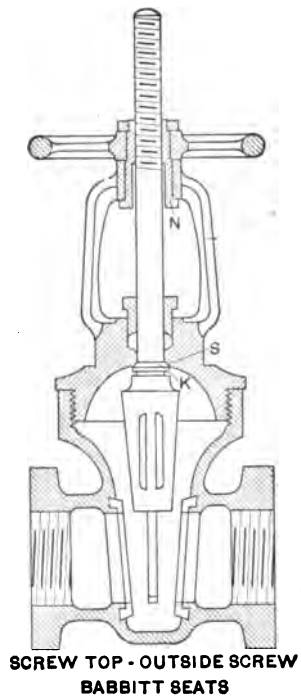


FIG. 4

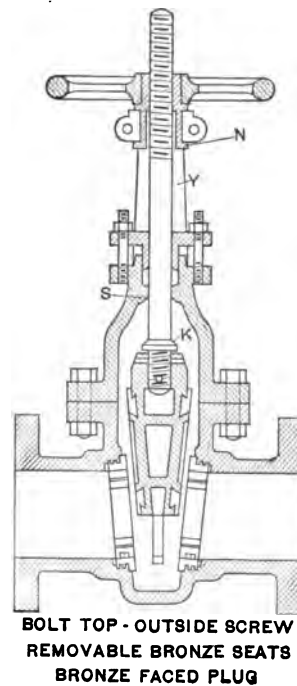
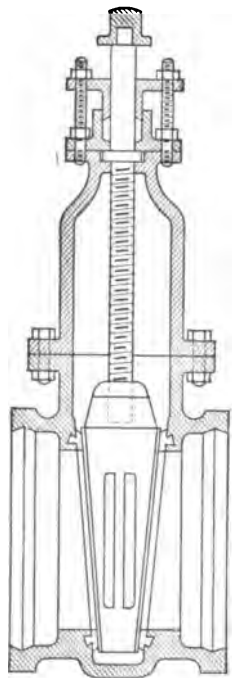


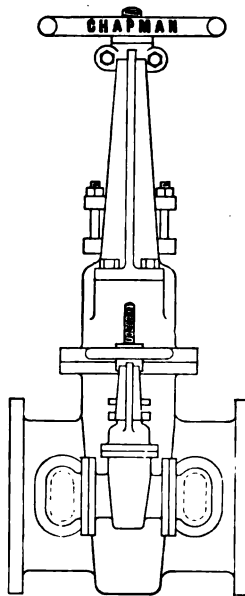
FIG. 5

# CUTS OF TYPICAL CHAPMAN VALVES



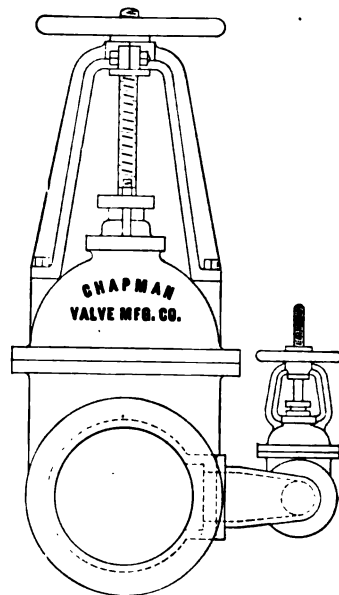
**BOLT TOP - INSIDE SCREW  
BABBITT SEATS - BELL ENDS**

**FIG. 6**



**OUTSIDE SCREW VALVE  
WITH BY-PASS**

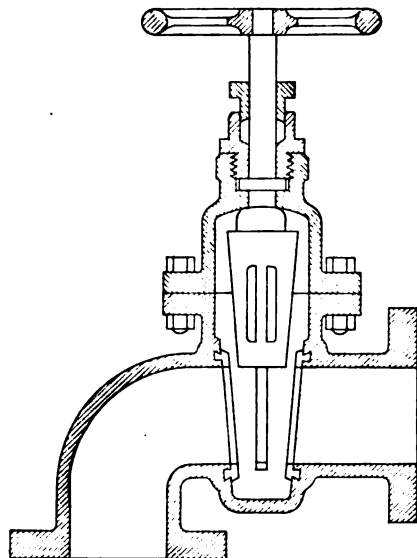
**FIG. 7**



**END VIEW OF FIG. 7 SHOWING  
YOKE**

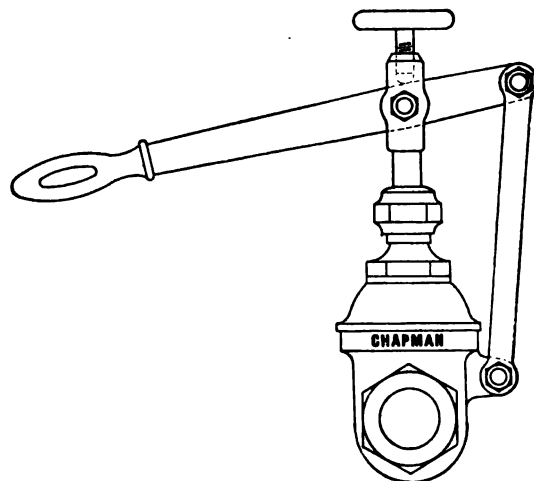
**FIG. 8**

**CUTS OF TYPICAL CHAPMAN VALVES**



**BOLT TOP ANGLE VALVE  
INSIDE SCREW-BABBITT SEATS**

**FIG. 9**



**SCREW TOP - SCREW ENDS  
SLIDING STEM AND LEVER**

**FIG. 10**

**CUTS OF TYPICAL CHAPMAN VALVES**



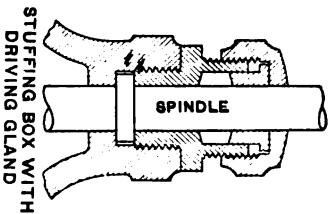


FIG. 11

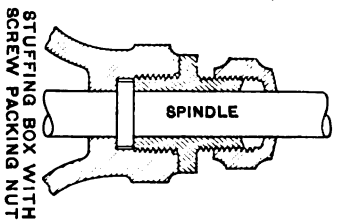


FIG. 12

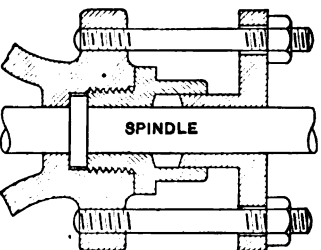


FIG. 13

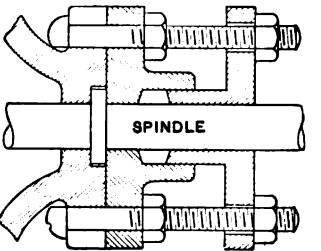


FIG. 14

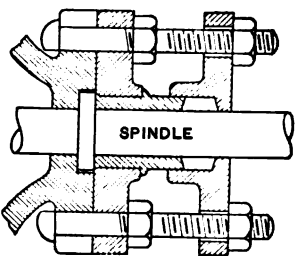


FIG. 15

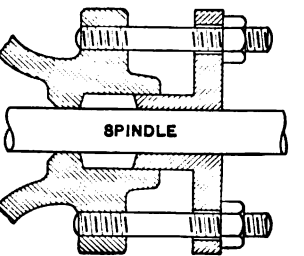


FIG. 16

DETAILS OF STUFFING BOXES USED ON CHAPMAN VALVES.



**FIG. 17**

**VIEW SHOWING HALF OF FINISHED  
FACE AND DOVETAILED TEETH**



**FIG. 18**

**VIEW SHOWING BRONZE FACE  
AFTER PEENING AND BEFORE TURNING**

**CUTS SHOWING METHOD OF ATTACHING BRONZE FACES TO IRON PLUGS**



**CHAPMAN  
VALVE MFG. CO.**

**INDIAN ORCHARD;  
MASS., U. S. A.**



**NOTICE—**

All valves and hydrants manufactured by us will have our NAME IN FULL, either rolled in or cast upon the shells; our MONOGRAM TRADE-MARK, or our PATENTED HAND WHEEL, as shown above.

**CHAPMAN VALVE MANUFACTURING CO.**



SECTION I.

CHAPMAN BRONZE GATE VALVES

WITH

BABBITT METAL OR BRONZE SEATS

FOR

STEAM, WATER, AIR, ACIDS, ETC.



## BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER

LIST NO. 1

INSIDE SCREW, OUTSIDE SCREW, OR SLIDING STEM AND LEVER

SCREW, FLANGE OR UNION ENDS

SOLID BRONZE SEATS

125 POUNDS WORKING PRESSURE



FIG. 19  
SCREW END  
INSIDE SCREW

These valves are suitable for steam and water lines, plumbing, steam and hot water heating, brine, gas and air systems, etc. They are neat, strong and compact, of high class material and workmanship throughout. They are designed for a working steam or water pressure of 125 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

All parts of the valves except the wheels are of the best steam bronze. The wheels are of cast iron, japanned, and the trimmings are finished. The stuffing-boxes have driving glands except in the two largest sizes, which have screw packing-nuts. They are packed ready for use. The outside screw valves have the Chapman Self-Packing device, enabling them to be packed while open and under pressure.

We furnish the inside screw valves with T head or square nut on the spindle without extra charge and with lock-shield, wood wheel, Navy indicator or sliding stem and lever at an additional cost. Either inside or outside screw valves furnished with special thread for quick opening or with finished bronze wheel at extra cost.

Union end valves may have male, female or solder unions. We also make these valves without exterior finish and fit them with T head or square nut for use as service valves on gas systems.



FIG. 20  
FLANGE END  
OUTSIDE SCREW

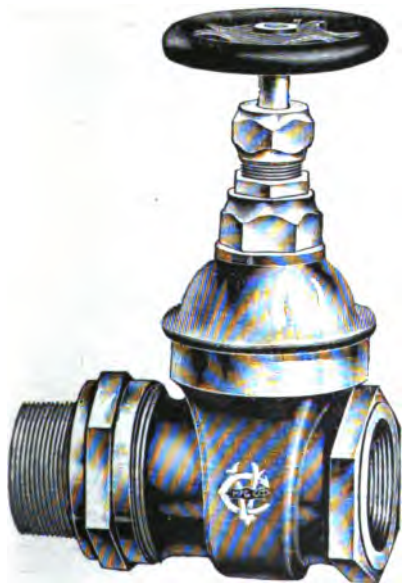


FIG. 21  
ONE SCREW END  
AND  
ONE UNION END



FIG. 22  
SCREW END  
OUTSIDE SCREW



FIG. 23  
SLIDING STEM AND LEVER

CHAPMAN VALVE MANUFACTURING CO.

PRICE LIST OF BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER

LIST NO. 1

SOLID BRONZE SEATS

DIAMETER OF PORT		INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Screw End,	Inside Screw		\$1.25	\$1.25	\$1.35	\$1.65	\$2.30	\$2.80	\$3.75	\$5.75	\$9.65			
Flange End,	" "					2.75	3.85	4.65	6.75	9.50	15.30			
Screw and Union End,	" "		1.55	1.55	1.75	2.35	3.05	3.85	5.40	7.70	12.50			
Navy Indicator,	" " , Extra						1.25	1.25	1.25	1.50	1.80			
Lock Shield,	" " , "		.65	.65	.65	.65	.65	.65	.65	.65	.70			
Sliding Stem and Lever,	" "		.70	.70	.70	.70	.70	.75	1.00	1.00	1.10			
Finished Brass Wheel,	" " , "				1.25	1.25	1.45	1.80	1.80	2.45	2.85			
Wood Wheel,	" " , "		.40	.40	.40	.40	.50	.55	.60	.60	.65			
Screw End,	Outside Screw													
Flange End,	" "													
Screw and Union End,	" "													
Finished Brass Wheel,	" " , Extra													
Drilling Flanges,	"						.35	.12	.12	.12	.16			
Weight, Screw End,	Inside Screw, lbs.		$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$2\frac{1}{8}$	$2\frac{1}{8}$	$3\frac{1}{8}$	$5\frac{1}{8}$	$7\frac{1}{8}$	14			
Weight, Flange End,	" " "					$2\frac{1}{8}$	$4\frac{1}{8}$	$5\frac{1}{8}$	$8\frac{1}{8}$	13	23			
Weight, Screw End,	Outside Screw, "													
Weight, Flange End,	" " "													

## BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER

LIST No. 2

INSIDE SCREW, OUTSIDE SCREW OR SLIDING STEM AND LEVER

SCREW OR UNION ENDS

SOLID BRONZE SEATS

125 POUNDS WORKING PRESSURE

These valves are suitable for steam and water lines, plumbing, steam and hot water heating, brine and air systems, etc. They are designed for a working pressure of 125 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

All parts of the valves except the wheels are of the best steam bronze. The wheels are of cast-iron, japanned, and the trimmings and end hexagons are finished. The stuffing-boxes of valves 3 inches and smaller have driving glands; the  $3\frac{1}{2}$  inch and 4 inch valves have screw packing-nuts. All stuffing-boxes are packed ready for use.

The outside screw valves have the Chapman Self-Packing device, enabling them to be packed while open and under pressure.

We furnish the inside screw valves with T head or square nut on the spindle without extra charge, and with lock-shield, wood wheel, Navy indicator or sliding stem and lever at an additional cost.

We furnish either inside or outside screw valves with special thread for quick opening or with finished brass wheel at extra cost.

The union end valves may have male, female or solder union.



FIG. 24

SCREW END  
INSIDE SCREW

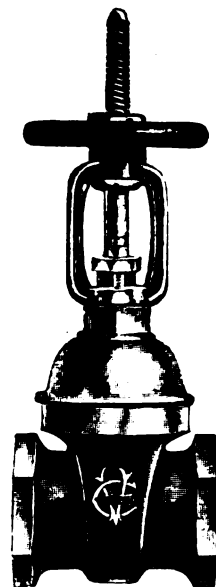


FIG. 25

SCREW END  
OUTSIDE SCREW



CHAPMAN VALVE MANUFACTURING CO.

PRICE LIST OF BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER

LIST NO. 2

SOLID BRONZE SEATS

DIAMETER OF PORT		INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Screw End,	Inside Screw				\$1.40	\$1.75	\$2.40	\$2.95	\$4.00	\$6.00	\$10.10			
Screw and Union End,	" "				1.80	2.40	3.10	3.90	5.50	7.80	13.00			
Navy Indicator,	" " , Extra						1.25	1.25	1.25	1.50	1.80			
Lock Shield,	" " , "				.65	.65	.65	.65	.65	.65	.70			
Sliding Stem and Lever,	"				.70	.70	.70	.75	1.00	1.00	1.10			
Finished Brass Wheel,	" " , "				1.25	1.25	1.45	1.80	1.80	2.45	2.85			
Finishing Valve,	" " , "													
Wood Wheel,	" " , "				.40	.40	.50	.55	.60	.60	.65			
Nickel Plating,	" " , "				.40	.40	.40	.40	.40	.40	.65			
Screw End,	Outside Screw													
Screw and Union End,	" "													
Nickel Plating,	" "													
Finished Brass Wheel,	" " , Extra													
Finishing Valve,	" " , "													
Drilling Flanges,	"						.35	.12	.12	.12	.16			
Weight, Screw End,	Inside Screw, lbs.				$1\frac{1}{2}$	$2\frac{3}{8}$	3	4	$5\frac{3}{8}$	$8\frac{1}{8}$	15			
Weight, Screw End,	Outside Screw, "													

For Flange End Valves see List No. 1

## BRONZE BOLT TOP GATE VALVES FOR STEAM AND WATER

LIST No. 3

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

SOLID BRONZE SEATS

3 1/4 IN. TO 9 IN.—125 POUNDS WORKING PRESSURE

10 IN. TO 13 IN.—75 POUNDS WORKING PRESSURE

These valves are suitable for steam and water lines, steam and hot water heating, brine and air systems, etc., and are extensively used in marine work, both by the U. S. Navy and the mercantile navy. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

With the exception of the wheels and cap bolts, these valves are made entirely of the best steam bronze. The wheels are of cast iron, japanned, and the cap bolts are wrought iron. Inside screw valves have screw packing-nut stuffing-boxes; all other valves have bolt-follower stuffing-boxes. All boxes are packed ready for use.

The outside screw valves have the Chapman Self-Packing feature, enabling them to be packed while open and under pressure.

We furnish the inside screw valves with T head or square nut on the spindle without extra charge, and with Navy indicator or sliding stem and lever at an additional cost.

We can furnish either inside or outside screw valves with special thread for quick opening, with finished brass wheel or with gearing, at extra cost.



FIG. 26

FLANGE END  
INSIDE SCREW

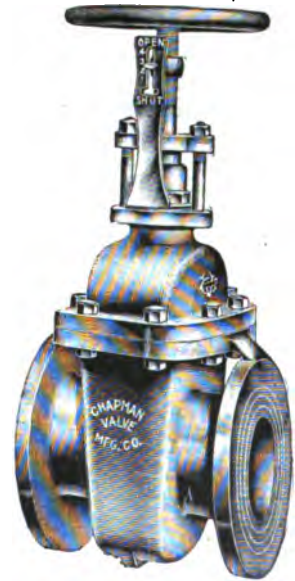


FIG. 27

FLANGE END WITH  
NAVY INDICATOR

CHAPMAN VALVE MANUFACTURING CO.

PRICE LIST OF BRONZE BOLT TOP GATE VALVES FOR STEAM AND WATER

LIST NO. 3

SOLID BRONZE SEATS

DIAMETER OF PORT*		INCHES	3½	4	4½	5	6	7	8	9	10	12
Screw End,	Inside Screw											
Flange End,	" "											
Navy Indicator,	" " , Extra											
Sliding Stem and Lever,	" "											
Finished Brass Wheel,	" " , "											
Screw End,	Outside Screw											
Flange End,	" "											
Finished Brass Wheel,	" " , Extra											
Drilling Flanges,	" "											
Weight, Screw End,	Inside Screw, lbs.											
Weight, Flange End,	" " "											
Weight, Screw End,	Outside Screw, "											
Weight, Flange End,	" " "											
Prices quoted upon application.		*Intermediate and larger sizes furnished if desired.										

**BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER**

INSIDE SCREW OR SLIDING STEM AND LEVER

SCREW, FLANGE OR UNION ENDS

BABBITT METAL OR SOLID BRONZE SEATS

125 POUNDS WORKING PRESSURE

These valves are suitable for steam and feed water lines, plumbing, steam and hot water heating, brine, gas and air systems, etc. BABBITT SEAT VALVES are suitable for a working water pressure of 125 pounds or a working steam pressure of 80 pounds; they should not be used where the temperature exceeds 325 degrees Fahrenheit. BRONZE SEAT VALVES are suitable for a working pressure of 125 pounds, steam or water. The valves have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

All parts of the valves except the wheels are made of the best steam metal. The wheels are of cast iron, japanned, and the trimmings and end hexagons are finished. The seats are of solid bronze or of special babbitt metal as preferred. The stuffing-boxes have driving glands in sizes 3 inches and smaller and screw packing-nuts in the larger sizes they are packed ready for use. We furnish these valves with T heads or square nuts on the spindles, or with inside screw and rising spindle as in Fig. 34, without extra charge. We also furnish them with lock shield, wood wheel, finished brass wheel, special thread for quick opening, sliding stem and lever or Navy indicator at an additional cost.

Union end valves may have male, female or solder union.

We also make this line of valves with removable bronze seats for which prices will be given upon application.

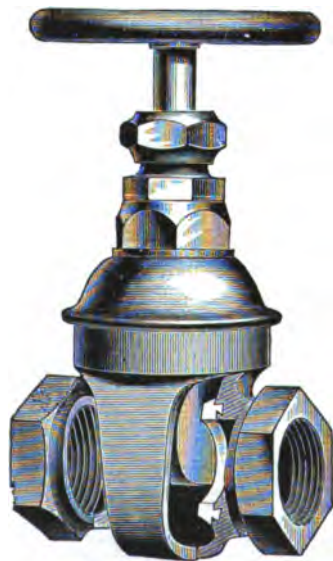


FIG. 28  
SCREW END  
BABBITT SEATS

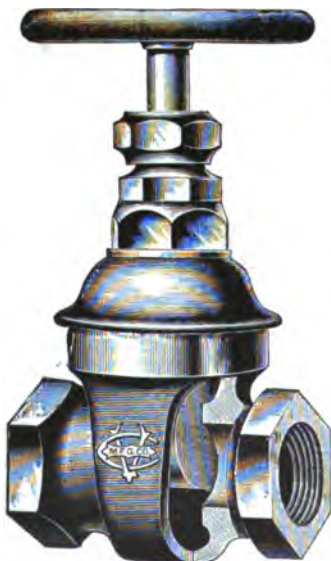


FIG. 29  
SCREW END  
SOLID BRONZE SEATS

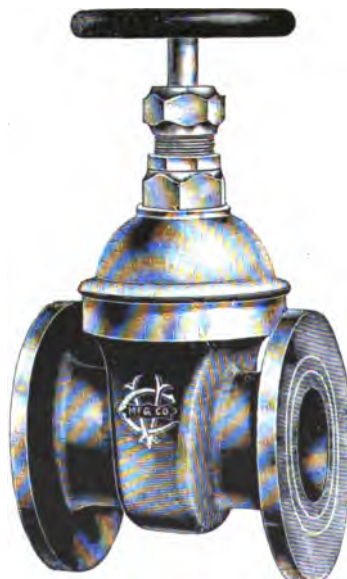


FIG. 30  
FLANGE END



FIG. 31  
SCREW END WITH  
LOCK SHIELD

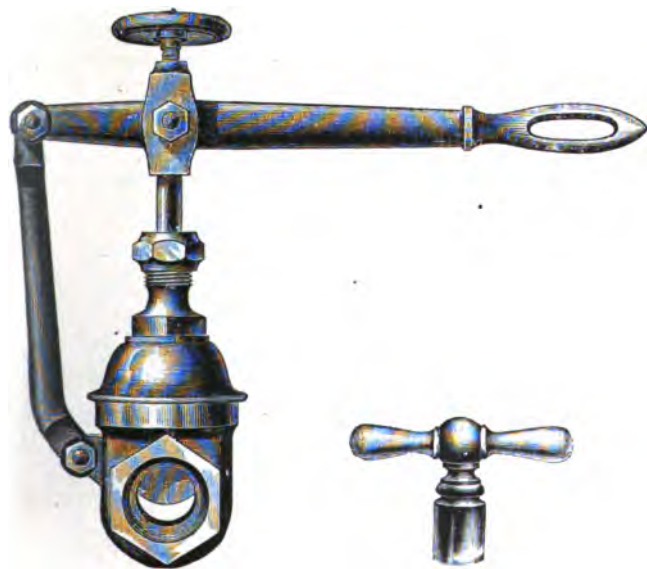


FIG. 32  
SLIDING STEM AND LEVER



FIG. 33  
LOCK SHIELD KEY



FIG. 34  
RISING SPINDLE  
INSIDE SCREW

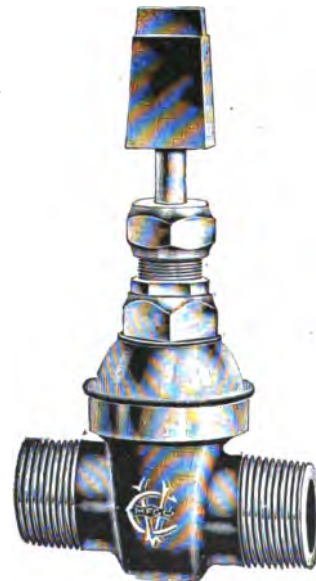


FIG. 35  
MALE ENDS AND NUT  
FOR CORPORATION COCK

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 1

PRICE LIST OF BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER

LIST NO. 4

BABBITT METAL OR SOLID BRONZE SEATS

DIAMETER OF PORT		INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4
Screw End,	Inside Screw		\$1.35	\$1.35	\$1.50	\$1.85	\$2.55	\$3.30	\$4.50	\$ 6.70	\$11.35	\$16.50	\$30.50	\$39.00
Flange End,	" "		2.00	2.00	2.50	2.85	4.00	5.00	7.25	10.25	16.35	20.75	38.00	46.25
Screw and Union End,	" "		1.65	1.65	1.90	2.40	3.25	4.20	5.80	8.50	14.00	20.00		
Navy Indicator,	Extra						1.25	1.25	1.25	1.50	1.80	2.00	2.25	2.50
Lock Shield,	"		.65	.65	.65	.65	.65	.65	.65	.65	.70	.70	.70	.70
Sliding Stem and Lever,	"		.70	.70	.70	.70	.70	.75	1.00	1.00	1.10	1.65	1.65	1.65
Finished Brass Wheel,	"		1.25	1.25	1.25	1.50	1.80	2.10	2.50	2.85	3.50	4.50	5.75	6.75
Finishing Valve,	"													
Wood Wheel,	"		.40	.40	.40	.40	.50	.55	.60	.60	.65			
Nickel Plating,	"		.40	.40	.40	.40	.40	.40	.40	.40	.65			
Drilling Flanges,	"						.35	.12	.12	.12	.16	.16	.16	.16
Weight, Screw End,	Inside Screw, lbs.		1 $\frac{1}{4}$	1 $\frac{1}{4}$	1 $\frac{1}{4}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	5	6	9 $\frac{1}{4}$	15 $\frac{1}{2}$	24 $\frac{1}{2}$	42 $\frac{1}{2}$	55 $\frac{1}{2}$
Weight, Flange End,	" " "		1 $\frac{1}{4}$	1 $\frac{1}{4}$	2 $\frac{1}{2}$	3 $\frac{1}{4}$	5 $\frac{1}{2}$	7	9 $\frac{1}{2}$	14 $\frac{1}{2}$	22	30 $\frac{1}{2}$	52 $\frac{1}{2}$	60

**BRONZE SCREW TOP ANGLE GATE VALVES FOR WATER AND STEAM**

INSIDE SCREW OR SLIDING STEM AND LEVER

SCREW, FLANGE OR UNION ENDS

BABBITT SEATS—ALL SIZES  
BRONZE SEATS, 1½ IN. AND LARGER

125 POUNDS WORKING PRESSURE

The special feature of these valves is the angle end, enabling the valves to take the place of an elbow and straight valve with a saving of one joint. They are neat and compact, and are tight against pressure from either side.

These valves are suitable for water and steam lines, plumbing, steam and hot-water heating, brine and air systems, steam engine indicator connections, drip and jacket piping, etc.

The Babbitt Seat valves are suitable for a working water pressure of 125 pounds or a working steam pressure of 80 pounds; the temperature should not exceed 325 degrees Fahr. Bronze Seat valves are suitable for a working pressure of 125 pounds, steam or water. All parts of the valves except the wheels are of the best steam bronze. The wheels are of cast iron, jappanned. The seats are of special babbitt metal or solid bronze.

The stuffing-boxes have driving glands in sizes 3 inches and smaller, and screw packing-nuts above this. They are packed ready for use. The trimmings and end hexagons are finished. Union end valves may have the union on either straight or angle end as desired, and may have male, female or solder union.

We furnish the valves with T head or square nut on the spindle without extra charge, and with lock shield, wood wheel, finished brass wheel, special thread for quick opening, stem and lever or Navy Indicator at an additional cost.

We also make these valves with male thread on angle end for use as positive air relief valves on street mains and long pipe lines and on street sprinkling stand-pipes.



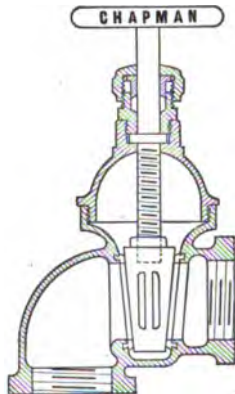


FIG. 36  
CROSS SECTION



FIG. 37  
SCREW END    WOOD WHEEL

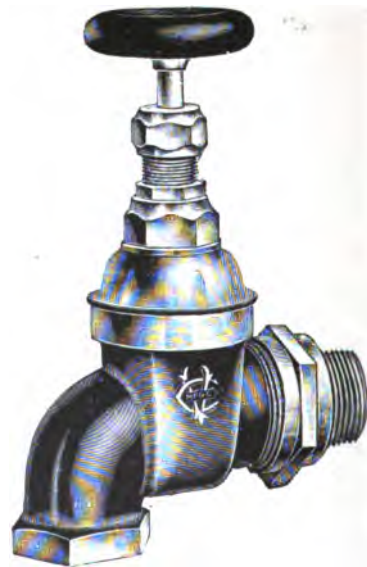


FIG. 38  
ONE SCREW AND ONE UNION END  
WOOD WHEEL

**BRONZE ANGLE VALVES**

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 20

LIST NO. 5

PRICE LIST OF BRONZE SCREW TOP ANGLE GATE VALVES FOR STEAM AND WATER

RABBITT BEATS ALL SIZES

SOLID BRONZE BEATS  $1\frac{1}{2}$  IN. AND LARGER

DIAMETER OF PORT		INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Screw End,	Inside Screw		\$1.75	\$1.75	\$2.00	\$2.45	\$3.25	\$4.10	\$5.00	\$7.75	\$11.50	\$17.50		\$41.25
Flange End,	" "				3.00	3.50	4.85	6.00	7.50	11.00	16.25	21.50		
Screw and Union End,	" "		2.25	2.25	2.50	3.00	4.10	5.30	6.40	9.75	14.25	21.25		
Navy Indicator,	Extra						1.25	1.25	1.25	1.50	1.80	2.00	2.25	2.50
Lock Shield,	"		.65	.65	.65	.65	.65	.65	.65	.65	.70	.70	.70	.70
Sliding Stem and Lever,	"		.70	.70	.70	.70	.70	.75	1.00	1.00	1.10	1.65	1.65	1.65
Finished Brass Wheel,	"		1.25	1.25	1.25	1.50	1.80	2.10	2.50	2.85	3.50	4.50	5.75	6.75
Finishing Valve,	"													
Wood Wheel,	"		.40	.40	.40	.40	.50	.55	.60	.60	.65			
Nickel Plating,	"		.40	.40	.40	.40	.40	.40	.40	.40	.65			
Drilling Flanges,	"						.35	.12	.12	.12	.16	.16	.16	.16
Weight, Screw End,	Inside Screw, lbs.		$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{4}$	$2\frac{1}{2}$	$3\frac{1}{4}$	$5\frac{1}{4}$	$6\frac{1}{4}$	$11\frac{1}{4}$	$17\frac{1}{4}$	$25\frac{1}{4}$		60
Weight, Flange End,	" " "				$2\frac{1}{4}$	$3\frac{1}{4}$	$5\frac{1}{4}$	$7\frac{1}{4}$	$10\frac{1}{4}$	$16\frac{1}{4}$	$25\frac{1}{4}$	34		

**BRONZE SCREW TOP CORNER GATE VALVES**

INSIDE SCREW

SCREW OR UNION ENDS

\*BABBITT METAL SEATS

125 POUNDS WORKING WATER PRESSURE

80 POUNDS WORKING STEAM PRESSURE

These valves are suitable for steam and water lines, plumbing, brine and air systems, steam engine indicator connections, drip and jacket piping, etc. They are especially adapted for HIGH CLASS STEAM AND HOT WATER HEATING. They are not affected by hot water or steam and are perfectly tight when closed; when open they afford a straightway passage of full area and do not interfere with the circulation.

They are designed for a working pressure of 125 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. The temperature should not exceed 325 degrees Fahrenheit, corresponding to saturated steam of 80 pounds gauge-pressure. All parts except the seats and wheels are made of the best steam bronze. The seats are of special babbitt metal and the wheels are of cast iron, japanned. The stuffing boxes are fitted with driving glands and packed ready for use.

The trimmings and end hexagons are finished.

We furnish these valves in either right hand or left hand pattern, and with T head or square nut on the spindle without extra charge. We also furnish them with wood wheel, finished brass wheel or special thread for quick opening at an additional cost. Union end valves may have male, female or solder union.

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\*The larger sizes 1 $\frac{1}{4}$  inches and upward are also made with solid bronze seats for 125 pounds working steam pressure, without extra charge.

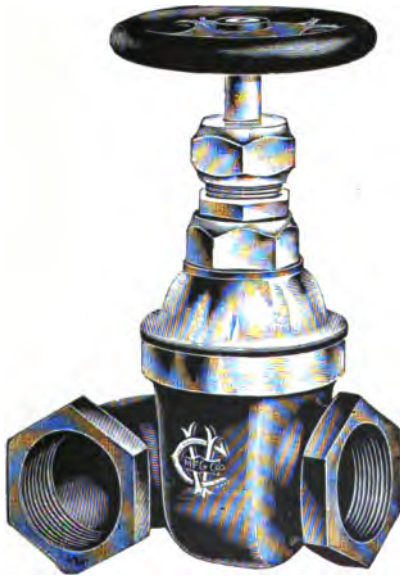


FIG. 39

LEFT-HAND VALVE WITH SCREW ENDS  
IRON WHEEL

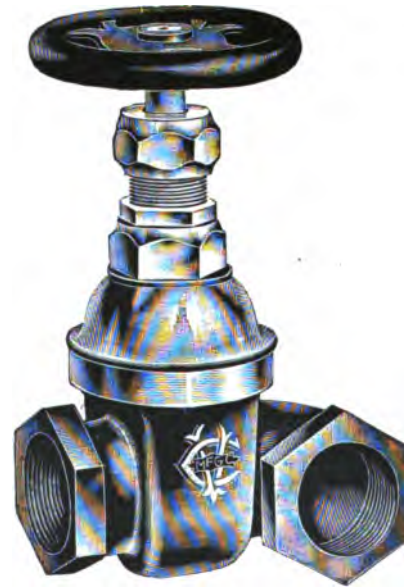


FIG. 40

RIGHT-HAND VALVE WITH SCREW ENDS  
IRON WHEEL

**BRONZE CORNER VALVES**



FIG. 41

LEFT-HAND VALVE WITH UNION  
WOOD WHEEL



FIG. 42

RIGHT-HAND VALVE WITH UNION  
WOOD WHEEL

**BRONZE CORNER VALVES**

## PRICE LIST OF BRONZE SCREW TOP CORNER VALVES FOR STEAM AND WATER

RABBIT METAL SEATS

DIAMETER OF PORT		INCHES	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$
Screw End,	Inside Screw		\$2.10	\$2.50	\$3.30	\$4.25	\$5.10	\$7.65	\$12.25
Screw and Union End,	" "		2.55	3.15	4.25	5.50	6.65	9.75	15.25
Navy Indicator,	Extra				1.25	1.25	1.25	1.50	1.80
Lock Shield,	"		.65	.65	.65	.65	.65	.65	.70
Finished Brass Wheel,	"		1.25	1.50	1.80	2.10	2.50	2.85	3.50
Nickel Plating,	"		.40	.40	.40	.40	.40	.40	.65
Wood Wheel,	"		.40	.40	.50	.55	.60	.60	.65
Finishing Valve,	"								
Weight, Screw End,	Inside Screw, lbs.		2	$2\frac{3}{4}$	$3\frac{1}{4}$	$4\frac{1}{4}$	$6\frac{1}{2}$	$10\frac{1}{4}$	18

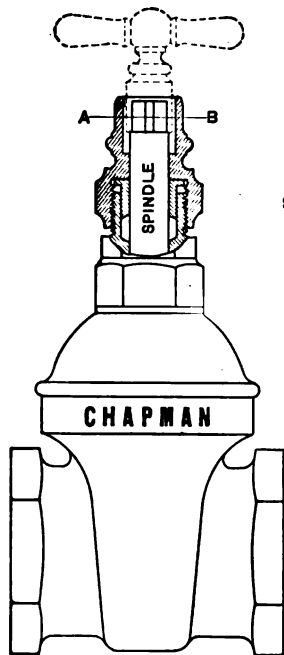


FIG. 43  
LOCK SHIELD AND KEY



SECTION A-B



FIG. 44  
FINISHED BRASS WHEEL

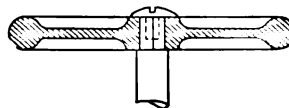


FIG. 45  
REMOVABLE BRASS WHEEL



FIG. 46  
NAVY INDICATOR

**SOME "EXTRA" FEATURES OF CHAPMAN BRONZE VALVES**

## BRONZE SCREW TOP GATE HOSE VALVES.

LIST No. 7

INSIDE SCREW.

SCREW, FLANGE OR SPECIAL ENDS.

SOLID BRONZE SEATS.

175 POUNDS WORKING WATER PRESSURE.

125 POUNDS WORKING STEAM PRESSURE.

These valves are especially designed for use on Underwriter Pumps, in Marine work and in Fire Departments, where space and weight are important considerations. They are strong, light and compact and fulfill all the requirements of the Underwriters' Association.

They are largely used by Fire Departments in connection with hydrants to obtain independent control of the streams from the nozzles to which they are attached. When used for this purpose, we fit the hydrant end with female hose thread, with loose coupling or with any special form of clutch or coupling desired. Prices for special ends given upon application.

These valves are also suitable for use with steam hose for various purposes. All parts of the valves except the wheels are of the best steam bronze. The wheels are of cast iron, japanned and the trimmings are finished. The stuffing-boxes have screw packing-nuts and are packed ready for use. The hose ends have male hose thread to suit purchasers' standard.

ALWAYS SEND GAUGE OR DIMENSIONS OF HOSE THREAD WANTED.

Screw pipe end shave AMERICAN STANDARD PIPE THREAD unless specified.

We furnish these valves with finished bronze cap and chain, finished brass wheel or with special thread for quick opening at an additional cost.



FIG. 47.

SCREW END  
WITHOUT CAP AND CHAIN



FIG. 48.

SCREW END  
WITH CAP AND CHAIN



CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 7

PRICE LIST OF BRONZE SCREW TOP HOSE VALVES

SOLID BRONZE SEATS

DIAMETER OF PORT		INCHES	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Screw End, without Cap and Chain								\$9.25			
Screw End, with " " "								11.25			
Flange End, without " " "								11.75			
Flange End, with " " "								13.75			
Finished Brass Wheel,	Extra							2.85			
Finishing Valve,	"										
Nickel Plating,	"							.65			
Drain Cock in Bottom.	"							.75			
Drilling Flange,	"							.10			
Weight, Screw End,	Lbs.							12			
Weight, Flange End,	"							15			
Weight, Cap and Chain,	Extra, "							$1\frac{1}{2}$			

**BRONZE SCREW TOP GATE HOSE VALVES**

INSIDE SCREW

SCREW OR FLANGE ENDS

BABBITT METAL OR SOLID BRONZE SEATS

125 POUNDS WORKING PRESSURE

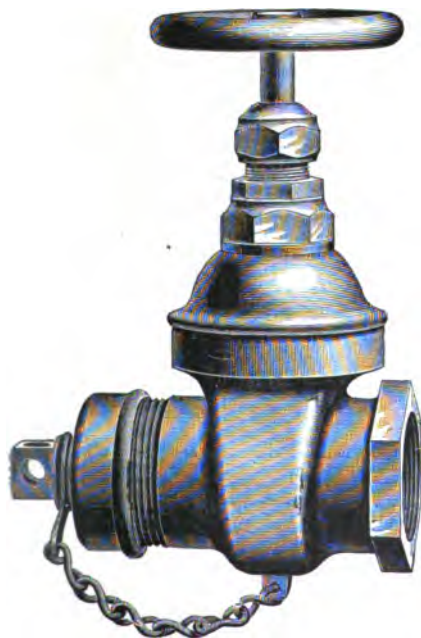


FIG. 49

SCREW END WITH CAP AND CHAIN

These valves fulfill all the requirements of the Underwriters' Association and are extensively used on Underwriter Pumps and in the U. S. Navy. The bronze seat valves are suitable for use with steam pressures above 80 pounds or in any case where the temperature exceeds 325 degrees Fahrenheit.

All parts of the valves except the wheels (and seats) are made of the best steam bronze. The wheels are of cast iron, japanned, and the seats are of babbitt metal or solid bronze. The stuffing boxes of valves 3 inches and smaller have driving glands; the larger sizes have screw packing nuts. All boxes are packed ready for use.

The trimmings and end hexagon are finished.

The hose ends have male hose thread to suit the purchaser's standard. ALWAYS SEND GAUGE OR DIMENSIONS OF HOSE THREAD WANTED. Screw pipe ends have AMERICAN STANDARD PIPE THREAD unless specified.

We furnish these valves with finished brass wheel, finished brass cap and chain, special thread for quick opening, sliding stem and lever or nickel-plated all over, at an additional cost.

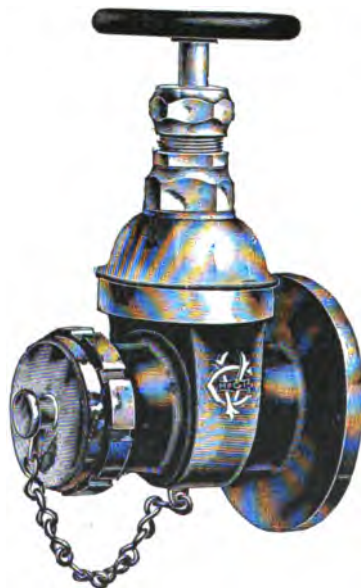


FIG. 50

FLANGE END  
WITH SPANNER CAP

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 2

LIST NO. 8

PRICE LIST OF BRONZE SCREW TOP HOSE VALVES

BABBITT METAL OR SOLID BRONZE SEATS

DIAMETER OF PORT		INCHES	$\frac{1}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Screw End, without Cap and Chain			\$2.00	\$2.75	\$3.50	\$5.00	\$7.25	\$11.50	\$16.50	\$30.50	\$39.50
Screw End, with Cap and Chain			2.80	3.80	4.75	6.40	9.00	13.30	19.00	34.25	43.75
Flange End, without Cap and Chain			2.55	3.50	4.35	6.25	9.00	13.70	18.50	34.25	43.25
Flange End, with Cap and Chain			3.35	4.55	5.60	7.70	10.75	15.60	21.00	38.00	47.50
Finished Brass Wheel,	Extra		1.50	1.80	2.10	2.50	2.85	3.50	4.50	5.75	6.75
Finishing Valve,	"										
Nickel Plating,	"		.40	.40	.40	.40	.40	.65			
Drilling Flange,	"			.18	.05	.05	.05	.10	.10	.10	.10
Drain Cock in Bottom,	"		.75	.75	.75	.75	.75	.75	.75	.75	.75
Weight, Screw End,	lbs.		2 $\frac{1}{4}$	3 $\frac{1}{4}$	4 $\frac{1}{4}$	6 $\frac{1}{2}$	10	14 $\frac{1}{2}$	24	41 $\frac{1}{2}$	53
Weight, Flange End,	"		2 $\frac{3}{4}$	4 $\frac{1}{4}$	6	8 $\frac{1}{4}$	12 $\frac{1}{4}$	18 $\frac{1}{4}$	27 $\frac{1}{2}$	46	58 $\frac{1}{2}$
Weight, Cap and Chain,	Extra "		$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	2	3	4

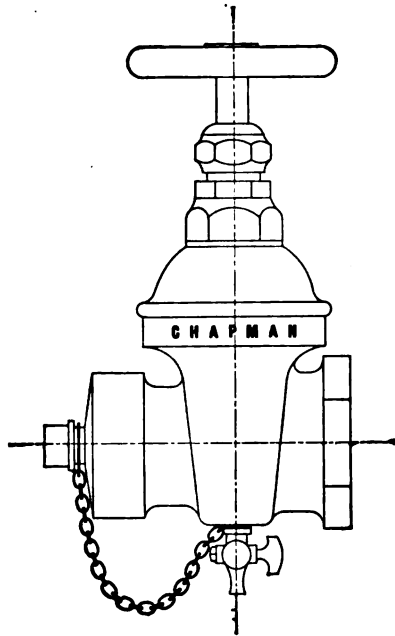


FIG. 51

DRAIN COCK IN BOTTOM  
FOR EXPOSED POSITIONS

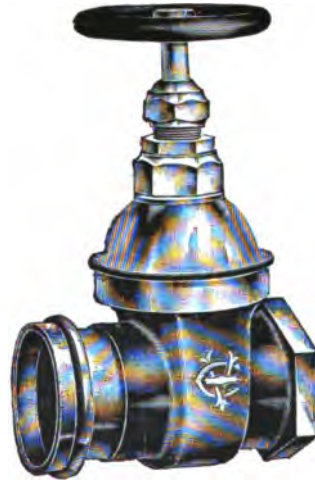


FIG. 52  
ONE SCREW END  
AND  
ONE JONES' COUPLING



FIG. 53  
ONE FEMALE END  
AND  
ONE SWIVEL END



FIG. 54  
ONE MALE END  
AND  
ONE SWIVEL END

CUTS SHOWING MODIFICATIONS OF CHAPMAN HOSE VALVES

**\*BRONZE AUTOMATIC DRIP OR STOP-AND-WASTE GATE VALVES**

INSIDE SCREW

SCREW OR FLANGE ENDS

BABBITT METAL SEATS

125 POUNDS WORKING PRESSURE



FIG. 55

PLAIN DRIP OUTLET

In many cases it is necessary to drain the water out of a pipe after the supply has been cut off by closing the main valve. To avoid the expense and uncertainty of a separate valve for this purpose we have incorporated in our valve an automatic drip, which answers every requirement, of moderate cost, simplicity and positive action.

The operation is as follows: The hollow gate or plug P is guided in our usual manner by grooves in the edges, which engage with ribs or splines R R in the body. In the wider of these grooves is a bronze plate or gib G, accurately fitted to the face of the rib. This gib moves up and down with the plug and alternately covers and uncovers a drip hole D in the valve body. A waste hole W in one face of the hollow plug allows the water to drain out of the pipe when the valve is closed. The drip is entirely automatic in its action and is operated by the direct action of the plug without intermediate mechanism. It is so arranged that the moment the plug commences to rise the drip outlet is sealed and remains sealed until the valve is closed. The drip is always open when the valve is closed, insuring perfect drainage.

These valves are made of the best steam bronze, with iron wheels and babbitt metal seats. The stuffing-boxes are fitted with driving glands and are packed ready for use.

If desired, we furnish the valves with T head or square nut on the spindle without extra charge.

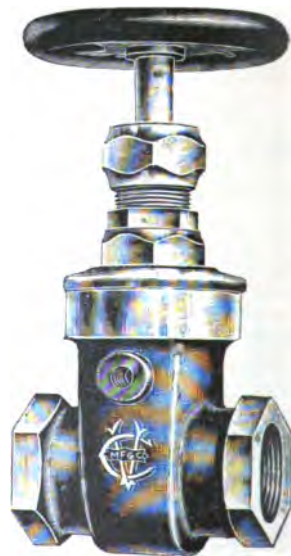


FIG. 56

TAPPED BOSS ON DRIP OUTLET

Unless otherwise ordered, valves have plain drip outlets as in Figure 55; drip outlets provided with boss, tapped for drain pipe, as in Figure 56, at an additional price.

These valves are suitable for railroad water pipes, fire protection and street sprinkling stand-pipes or for any purpose where a drip is desirable. When fitted with T head or square nut they are, especially suitable for use as stop-and-waste valves for the house pipes of water works and plumbing systems.

They are designed for a working pressure of 125 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

\*For iron body drip valves see List No. 27.

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 3		LIST NO. 9				
PRICE LIST OF BRONZE AUTOMATIC DRIP OR STOP-AND-WASTE VALVES						
SABBITT METAL SEATS						
DIAMETER OF PORT		INCHES	$\frac{3}{4}$	1	$1\frac{1}{2}$	2
Screw Ends, with Plain Drip Outlet,		\$4.00	\$4.55			\$13.60
Screw Ends, with Tapped Boss on Drip Outlet,		4.10	4.65			13.75
Flange Ends, with Plain Drip Outlet,		5.40	6.40			17.50
Flange Ends, with Tapped Boss on Drip Outlet,		5.50	6.50			17.65
Finished Weight, Screw End,		$3\frac{1}{4}$	$3\frac{3}{4}$	5	$6\frac{1}{2}$	16
Finished Weight, Flange End,		4	$5\frac{1}{4}$	7	10	21

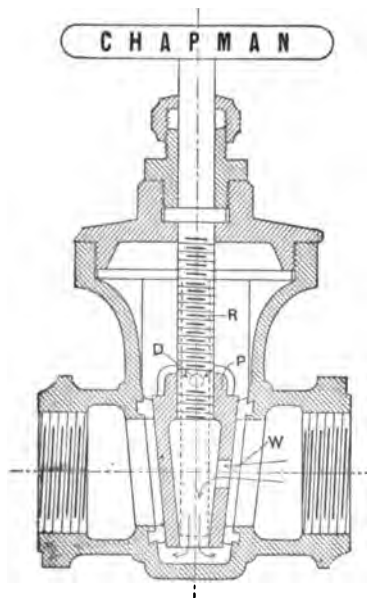


FIG. 57  
LONGITUDINAL SECTION  
SHOWING  
VALVE CLOSED AND DRIP OPEN

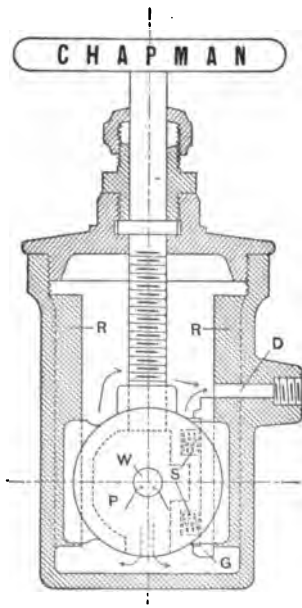


FIG. 58  
TRANSVERSE SECTION  
SHOWING  
VALVE CLOSED AND DRIP OPEN  
**AUTOMATIC DRIP VALVE**

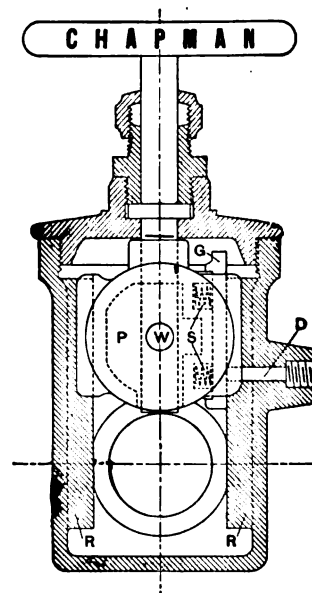


FIG. 59  
TRANSVERSE SECTION  
SHOWING  
VALVE OPEN AND DRIP CLOSED

**BRONZE SCREW TOP GATE BIBB VALVES****INSIDE SCREW****SCREW END****\*BABBITT METAL SEATS****125 POUNDS WORKING WATER PRESSURE****80 POUNDS WORKING STEAM PRESSURE**

---

These valves are especially suitable for high class plumbing, brewery work, etc. Unlike the rubber seated compression bibb, they are not affected by hot water. They are perfectly tight when closed and afford a straightway passage of full area when open. The valve seats and plug faces are of dissimilar metals; the valves will not stick and can be operated easier than those of the ground key or plug cock type.

They are designed for a working pressure of 125 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. The temperature should not exceed 325 degrees Fahrenheit, corresponding to saturated steam of 80 pounds gage-pressure.

With the exception of the babbitt metal seats, all parts of the valves are of the best steam metal. The stuffing-boxes of valves 3 inches and less in size have driving glands and are packed ready for use. The trimmings and end hexagon are finished.

We furnish these valves with male or female pipe end and with japanned cast iron wheel in place of T handle without extra charge. Hose ends are threaded to suit purchaser's standard. ALWAYS SEND GAUGE OR DIMENSIONS OF HOSE THREAD WANTED. Pipe ends have AMERICAN STANDARD PIPE THREAD unless specified.

We also furnish these valves with finished brass wheel, special thread for quick opening, or nickel-plated all over at an additional cost.

---

\*Sizes  $1\frac{1}{4}$  inch and larger are also made with solid bronze seats for use where the temperature exceeds 325 degrees Fahrenheit without additional charge.



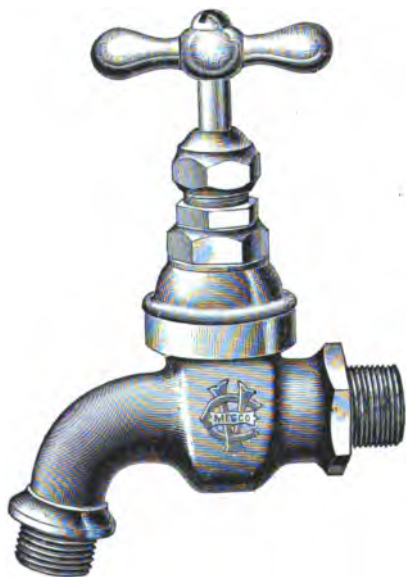


FIG. 60  
HOSE BIBB END—MALE PIPE END  
T HANDLE

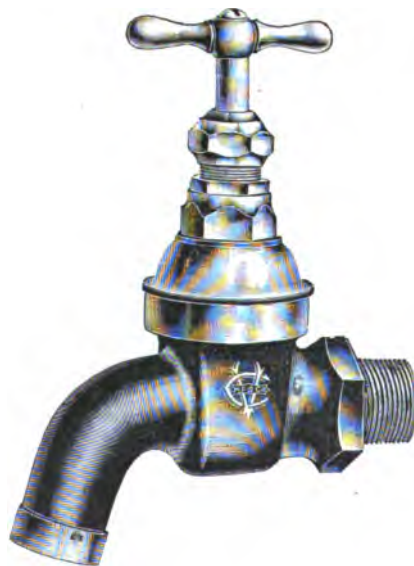


FIG. 61  
PLAIN BIBB END—MALE PIPE END  
T HANDLE



FIG. 62  
HOSE BIBB END—FEMALE PIPE END  
IRON WHEEL

**BRONZE BIBB VALVES**

## PRICE LIST OF BRONZE SCREW TOP BIBB GATE VALVES

BABBITT SEATS--ALL SIZES, OR SOLID BRONZE SEATS-- $1\frac{1}{4}$  IN. AND LARGER

DIAMETER OF PORT		INCHES	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Plain Bibb End,			\$2.80	\$3.45	\$4.60	\$5.75	\$6.50	\$9.60	\$14.00			
Hose Bibb End,			3.00	3.60	4.85	6.00	6.75	10.25	15.00			
Finished Brass Wheel,	Extra		1.25	1.50	1.80	2.10	2.50	2.85	3.50			
Finishing Valve,	"											
Nickel Plating,	"		.40	.40	.40	.40	.40	.40	.65			
Weight,	lbs.		$1\frac{1}{8}$	$2\frac{1}{2}$	$3\frac{1}{2}$	$5\frac{5}{8}$	$6\frac{1}{8}$	$10\frac{3}{8}$	$17\frac{1}{2}$			

## HEAVY BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER

LIST NO 11

SCREW OR FLANGE ENDS

INSIDE OR OUTSIDE SCREW

\*SOLID BRONZE SEATS

250 POUNDS WORKING PRESSURE

---

These valves are suitable for high pressure steam and water lines, air systems, etc., and are extensively used on high class marine and power plant work. They are designed for a working pressure of 250 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

These valves are made from heavy patterns, and all parts except the wheels and seats are made of the best steam bronze. The seats are of special babbitt metal or of solid bronze. The wheels are of cast iron, japanned. Inside screw valves have driving gland stuffing-boxes. Outside screw valves have bolt-follower stuffing-boxes and are fitted with the Chapman Self-Packing device, enabling them to be packed while open and under pressure. All stuffing-boxes are packed ready for use. The trimmings and end hexagons are finished.

We furnish the inside screw valves with T head or square nut without extra charge, and Navy indicator at an additional cost.

Either inside or outside screw valves may have finished brass wheel at extra cost.

---

\*These valves are also made with special babbitt metal seats for use on water, air, etc.; they should not be used where the temperature exceeds 325 degrees Fahrenheit.



FIG. 63  
SCREW END  
INSIDE SCREW



FIG. 64  
SCREW END  
OUTSIDE SCREW

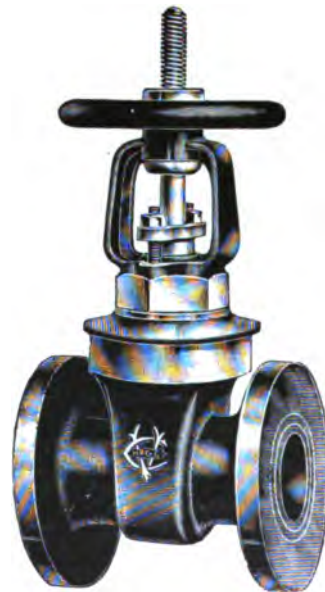


FIG. 65  
FLANGE END  
OUTSIDE SCREW

## PRICE LIST OF HEAVY BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER

## SOLID BRONZE SEATS

DIAMETER OF PORT		INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Screw End,	Inside Screw		\$3.50	\$3.50	\$3.85	\$5.20	\$6.35	\$8.00	\$10.30	\$15.20	\$22.75	\$32.50
Flange End,	" "		4.35	4.35	5.10	6.50	8.70	10.80	13.85	20.50	31.00	39.50
Navy Indicator,	" " , Extra						1.25	1.25	1.25	1.50	1.80	2.00
Finished Brass Wheel,	" " , "		1.80	1.80	2.10	2.50	2.85	2.85	3.50	4.50	5.30	5.30
Finishing Valve,	" " , "											
Screw End,	Outside Screw		5.00	5.00	5.50	6.85	8.25	9.85	12.85	17.85	26.00	37.50
Flange End,	" "		5.90	5.90	6.65	8.25	10.50	12.75	16.50	23.25	34.00	44.50
Finished Brass Wheel,	" " , Extra											
Finishing Valve,	" " , "											
Drilling Flanges,	"						.35	.12	.12	.12	.16	.16
Weight, Screw End,	Inside Screw, Lbs.		3	3	$3\frac{1}{2}$	$5\frac{1}{2}$	$7\frac{1}{2}$	9	$13\frac{1}{2}$	20	$30\frac{1}{2}$	45
" , Flange End,	" " "		4	4	5	$6\frac{1}{2}$	10	$12\frac{1}{2}$	$16\frac{1}{2}$	$26\frac{1}{2}$	42	$54\frac{1}{2}$
" , Screw End,	Outside " "		$3\frac{1}{2}$	$3\frac{1}{2}$	4	$5\frac{1}{2}$	$8\frac{1}{2}$	10	$14\frac{1}{2}$	22	33	$49\frac{1}{2}$
" , Flange End,	" " "		$4\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$7\frac{1}{2}$	11	$13\frac{1}{2}$	$18\frac{1}{2}$	$28\frac{1}{2}$	$44\frac{1}{2}$	59

## HEAVY BRONZE BOLT TOP GATE VALVES FOR STEAM AND WATER

LIST NO. 12

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

SOLID BRONZE SEATS

3½ IN. TO 9 IN.—175 POUNDS WKG. WATER PRESSURE  
3¼ IN. TO 6 IN.—150 POUNDS WKG. STEAM PRESSURE

10 IN. TO 13 IN.—150 POUNDS WKG. WATER PRESSURE  
7 IN. TO 13 IN.—MADE SPECIAL FOR HIGH PRESSURE STEAM

These valves are suitable for high pressure steam and water lines, brine and air systems, etc., and are extensively used in marine work, both by the U. S. Navy and the mercantile navy. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

With the exception of the wheels and cap bolts, these valves are made entirely of the best steam bronze. The wheels are of cast iron, japanned, and the cap bolts and nuts are of wrought iron. The stuffing-boxes have bolt-followers and are packed ready for use. The outside screw valves have the Chapman Self-Packing device, enabling them to be packed while open and under pressure.

We furnish either inside or outside screw valves with finished brass wheels, with by-pass or with gearing, at an additional cost.

The inside screw valves may be fitted with Navy indicators, for which we charge extra.



FIG. 66  
FLANGE END  
INSIDE SCREW

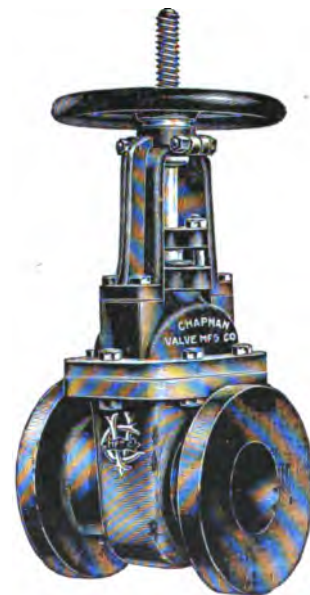


FIG. 67  
FLANGE END  
OUTSIDE SCREW

CHAPMAN VALVE MANUFACTURING CO.

LIST No. 12

PRICE LIST OF HEAVY BRONZE BOLT TOP GATE VALVES FOR STEAM AND WATER

SOLID BRONZE SEATS

DIAMETER OF PORT <sup>a</sup>		INCHES	2½	3	3½	4	4½	5	6	7	8	9	10	12
Screw End,	Inside Screw													
Flange End,	" "													
Navy Indicator,	" " , Extra													
Finished Brass Wheel,	" " , "													
Screw End,	Outside Screw													
Flange End,	" "													
Finished Brass Wheel,	" " , Extra													
Drilling Flanges,	"													
Weight, Screw End,	Inside Screw, lbs.													
Weight, Flange End,	" " "													
Weight, Screw End,	Outside Screw, "													
Weight, Flange End,	" " "													

Prices quoted upon application

\*Intermediate and larger sizes furnished if desired

## HEAVY BRONZE SCREW TOP ANGLE GATE VALVES FOR STEAM AND WATER

LIST NO. 13

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS    BABBITT SEATS—ALL SIZES  
BRONZE SEATS— $\frac{1}{4}$  IN. AND LARGER  
250 POUNDS WORKING PRESSURE



FIG. 68  
SCREW END  
INSIDE SCREW

The special feature of these valves is the angle end which enables them to take the place of an elbow and straight valve with a saving of one joint in the pipe line. They are neat and compact and are tight against pressure from either side. They are suitable for high pressure steam and water lines, brine and air systems, etc., and are extensively used on high class marine and power plant work. They are designed for a working pressure of 250 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

The babbitt seated valves are suitable for any service where the temperature does not exceed 325 degrees Fahrenheit.

These valves are made from heavy patterns and all parts except the wheels and seats are made of the best steam bronze. The seats are of special babbitt metal or of solid bronze. The wheels are of cast iron, japanned. Inside screw valves have driving gland stuffing-boxes. Outside screw valves have bolt follower stuffing-boxes and are fitted with the Chapman Self-Packing device, enabling them to be packed while open and under pressure. All stuffing-boxes are packed ready for use. The trimmings and end hexagons are finished.

We furnish the inside screw valves with T head or square nut without extra charge and with Navy indicator at an additional cost. Either inside or outside screw valves may be fitted with finished brass wheels.



FIG. 69  
SCREW END  
OUTSIDE SCREW



CHAPMAN VALVE MANUFACTURING CO.

LIST No. 12

PRICE LIST OF HEAVY BRONZE BOLT TOP GATE VALVES FOR STEAM AND WATER

SOLID BRONZE SEATS

DIAMETER OF PORT*		INCHES	2½	3	3½	4	4½	5	6	7	8	9	10	12
Screw End,	Inside Screw													
Flange End,	" "													
Navy Indicator,	" " , Extra													
Finished Brass Wheel,	" " , "													
Screw End,	Outside Screw													
Flange End,	" "													
Finished Brass Wheel,	" " , Extra													
Drilling Flanges,	"													
Weight, Screw End,	Inside Screw, lbs.													
Weight, Flange End,	" " "													
Weight, Screw End,	Outside Screw, "													
Weight, Flange End,	" " "													
Prices quoted upon application		*Intermediate and larger sizes furnished if desired												

## HEAVY BRONZE SCREW TOP ANGLE GATE VALVES FOR STEAM AND WATER

LIST NO. 13

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS    BABBITT SEATS—ALL SIZES  
BRONZE SEATS— $1\frac{1}{4}$  IN. AND LARGER  
250 POUNDS WORKING PRESSURE

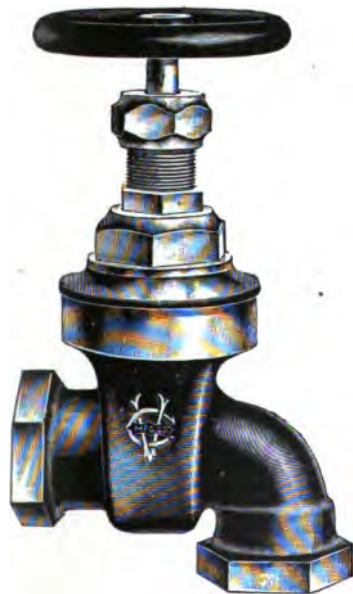


FIG. 68  
SCREW END  
INSIDE SCREW

The special feature of these valves is the angle end which enables them to take the place of an elbow and straight valve with a saving of one joint in the pipe line. They are neat and compact and are tight against pressure from either side. They are suitable for high pressure steam and water lines, brine and air systems, etc., and are extensively used on high class marine and power plant work. They are designed for a working pressure of 250 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

The babbitt seated valves are suitable for any service where the temperature does not exceed 325 degrees Fahrenheit.

These valves are made from heavy patterns and all parts except the wheels and seats are made of the best steam bronze. The seats are of special babbitt metal or of solid bronze. The wheels are of cast iron, japanned. Inside screw valves have driving gland stuffing-boxes. Outside screw valves have bolt follower stuffing-boxes and are fitted with the Chapman Self-Packing device, enabling them to be packed while open and under pressure. All stuffing-boxes are packed ready for use. The trimmings and end hexagons are finished.

We furnish the inside screw valves with T head or square nut without extra charge and with Navy indicator at an additional cost. Either inside or outside screw valves may be fitted with finished brass wheels.

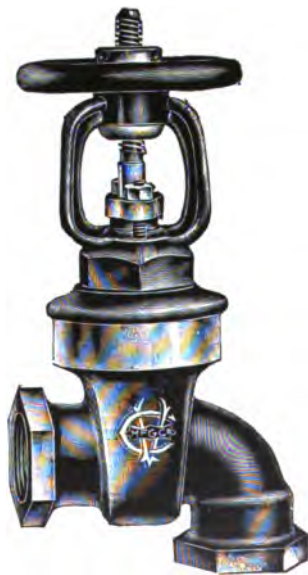


FIG. 69  
SCREW END  
OUTSIDE SCREW

CHAPMAN VALVE MANUFACTURING CO.

PRICE LIST OF HEAVY BRONZE SCREW TOP ANGLE GATE VALVES FOR STEAM AND WATER

LIST NO. 13

BABBITT SEATS ALL SIZES

SOLID BRONZE SEATS 1½ IN. AND LARGER

DIAMETER OF PORT		INCHES	½	¾	1	1½	2	2½	3
Screw End,	Inside Screw					\$9.00	\$11.60	\$16.50	
Flange End,	" "								
Navy Indicator,	" " , Extra					1.25	1.25	1.50	
Finished Brass Wheel,	" " , "					2.85	3.50	4.50	
Finishing Valve,	" " , "								
Screw End,	Outside Screw					10.85	14.25	19.25	
Flange End,	" "								
Finished Brass Wheel,	" " , "								
Finishing Valve,	" " , "								
Drilling Flanges,	"					.12	.12	.12	
Weight, Screw End,	Inside Screw, lbs.					9½	14½	21½	
Weight, Flange End,	" " , "								
Weight, Screw End,	Outside Screw, "					10½	15½	23½	
Weight, Flange End,	" " , "								

Prices for sizes not listed quoted upon application

## EXTRA HEAVY BRONZE GATE VALVES FOR WATER

LIST NO. 14

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

BABBITT OR BRONZE SEATS

$\frac{1}{4}$  IN. TO 2 IN.—1,000 LBS. WORKING PRESSURE

$2\frac{1}{2}$  IN. TO 4 IN.—800 LBS. WORKING PRESSURE

These valves are made from extra heavy patterns and are suitable for high pressure water lines, brine and air systems, hydraulic work, etc. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

The babbitt-seated valves are suitable for any service where the temperature does not exceed 325 degrees Fahrenheit.

These valves have bronze bodies, plugs, spindles and trimmings; japanned cast iron wheels and special babbitt metal or solid bronze seats.

Valves 2 inches and smaller in size have screw tops; larger valves have bolt tops with iron bolts and nuts. Screw top inside screw valves have driving gland stuffing-boxes; all other valves have bolt-follower boxes. All stuffing-boxes are packed ready for use. Outside screw valves have the Chapman Self-Packing device, enabling them to be packed while open and under pressure.

We furnish the inside screw valves with T head or square nut without extra charge and with Navy indicator at an additional cost.

Either inside or outside screw valves may be fitted with finished brass wheels or with gearing at an additional cost.

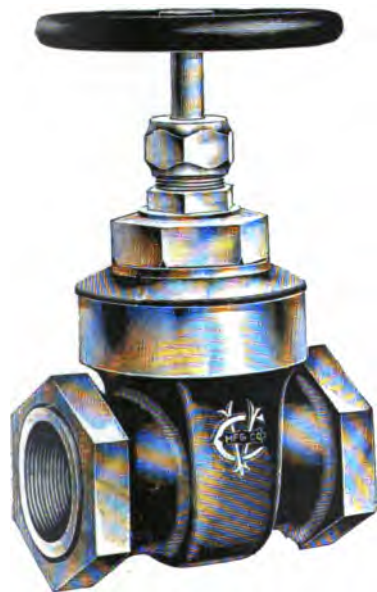


FIG. 70

SCREW END SCREW TOP  
INSIDE SCREW

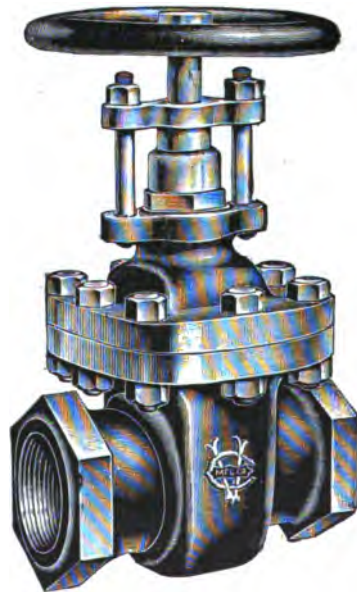


FIG. 71

SCREW END BOLT TOP  
INSIDE SCREW

## PRICE LIST OF EXTRA HEAVY BRONZE GATE VALVES FOR WATER

DABBITT OR SOLID BRONZE SEATS

		SCREW TOP								BOLT TOP			
DIAMETER OF PORT	INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Screw End, Inside Screw		\$5.10	\$5.10	\$6.00	\$8.00	\$11.00	\$13.50	\$17.00	\$23.00	\$50.00			
Flange End, " "				7.50	10.50	14.25	17.25	22.50	29.50	59.00			
Navy Indicator, " " , Extra													
Finished Brass Wheel, " " , "		1.80	1.80	2.50	2.85	3.50	3.50	4.50	5.30	6.75			
Screw End, Outside Screw													
Flange End, " "													
Finished Brass Wheel, " " , "													
Drilling Flanges, "						.20	.20	.20	.20	.35			
Weight, Screw End, Inside Screw, lbs.		5 $\frac{1}{4}$	5 $\frac{1}{4}$	6 $\frac{1}{2}$	9 $\frac{1}{2}$	14 $\frac{1}{2}$	17 $\frac{1}{2}$	23 $\frac{1}{4}$	32	64			
Weight, Flange End, " " "				8 $\frac{1}{4}$	12 $\frac{3}{4}$	19	22 $\frac{1}{2}$	31 $\frac{1}{2}$	42	75			
Weight, Screw End, Outside Screw, "													
Weight, Flange End, " " "													

## EXTRA HEAVY BRONZE ANGLE GATE VALVES FOR WATER

LIST NO. 15

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

\*BABBITT METAL SEATS

$\frac{1}{4}$  IN. TO 2 IN.—1,000 POUNDS WORKING PRESSURE

$2\frac{1}{2}$  IN. TO 4 IN.—500 POUNDS WORKING PRESSURE



FIG. 72

SCREW END  
INSIDE SCREW

The special feature of these valves is the angle end, which enables the valve to take the place of a straight valve and elbow with a saving of one joint. The valves are tight against pressure from either side.

They are made from extra heavy patterns and are suitable for high pressure water lines, brine and air systems, hydraulic work, etc. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

The babbitt-seated valves are suitable for any service where the temperature does not exceed 325 degrees Fahrenheit.

These valves have bronze bodies, caps, plugs, spindles and trimmings, japanned cast iron wheels and special babbitt metal or solid bronze seats. Valves 2 inches and smaller have screw tops; larger valves have bolt tops with iron bolts and nuts. Screw top inside screw valves have driving gland stuffing-boxes; all other valves have bolt-follower boxes. All stuffing-boxes are packed ready for use. Outside screw valves have the Chapman Self-Packing device, enabling them to be packed while open and under pressure.

We furnish the inside screw valves with T head or square nut without extra charge and with Navy indicator at an additional cost.

Either inside or outside screw valves may be fitted with finished brass wheels or with gearing.

\*Sizes  $\frac{1}{4}$  in. and larger are also made with solid bronze seats for use where the temperature exceeds 325 degrees Fah.



FIG. 73

FLANGE END  
OUTSIDE SCREW

CHAPMAN VALVE MANUFACTURING CO.

PRICE LIST OF EXTRA HEAVY BRONZE ANGLE GATE VALVES FOR WATER

LIST NO. 15

BABBITT SEATS ALL SIZES

SOLID BRONZE SEATS 1½ IN. AND LARGER

		SCREW TOP								BOLT TOP			
DIAMETER OF PORT	INCHES	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Screw End, Inside Screw										\$58.00			
Flange End, " "													
Navy Indicator, " " , Extra													
Finished Brass Wheel, " " , "										6.75			
Screw End, Outside Screw													
Flange End, " "													
Finished Brass Wheel, " " , Extra													
Drilling Flanges, "										.35			
Weight, Screw End, Inside Screw, lbs.										70			
Weight, Flange End, " " "													
Weight, Screw End, Outside " "													
Weight, Flange End, " " "													
Prices for sizes not listed quoted upon application													

# DOUBLE EXTRA HEAVY BRONZE SCREW TOP GATE VALVES FOR WATER AND AIR LIST NO. 16

INSIDE OR OUTSIDE SCREW

SCREW ENDS

BABBITT METAL SEATS

2,000 POUNDS WORKING WATER PRESSURE

These valves are suitable for high pressure hydraulic work, compressed air work, etc., and are of especially heavy pattern throughout, with large spindles and wheels.

They will stand a test pressure of 4,000 pounds per square inch and are designed for a working water pressure of 2,000 pounds where the temperature does not exceed 325 degrees Fahrenheit.

All parts of these valves, except the seats and wheels, are of the best steam bronze. The seats are of special babbitt metal and the wheels are of cast iron, japanned. The stuffing-boxes of inside screw valves are fitted with driving glands; outside screw valves have bolt followers. All stuffing-boxes are packed ready for use. The trimmings are finished.

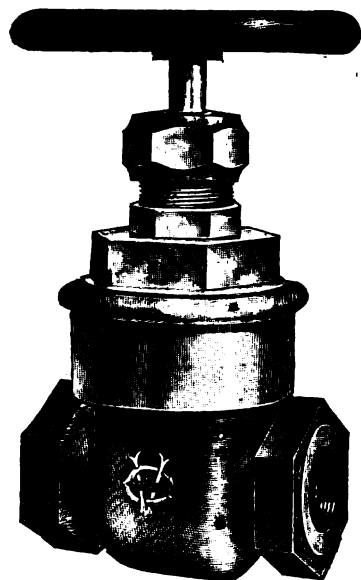


FIG. 74

SCREW END  
INSIDE SCREW

LIST NO. 16									
PRICE LIST OF DOUBLE EXTRA HEAVY BRONZE GATE VALVES FOR WATER AND AIR									
SCREW OR FLANGE ENDS									
DIAMETER OF PORT		INCHES	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	2	3	4
Screw End,	Inside Screw			\$17.50	\$23.00		\$34.00	\$49.00	
Flange End,	" "								
Screw End,	Outside Screw								
Flange End,	" "								
Weight, Screw End,	Inside Screw, lbs.	13	13	21	27	34	41	63	
Weight, Flange End,	" " "								
Weight, Screw End,	Outside " "								
Weight, Flange End,	" " "								



INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

BABBITT METAL SEATS

6,000 POUNDS WORKING WATER PRESSURE



FIG. 75  
SCREW END  
INSIDE SCREW

These valves are extremely heavy and massive in every part and are suitable for the heaviest class of hydraulic and compressed air work. They will stand a test pressure of 10,000 pounds per square inch and are designed for a working water pressure of 6,000 pounds where the temperature does not exceed 325 degrees Fahrenheit.

All parts except the seats and wheels are of the best quality of steam bronze. The seats are of special babbitt metal and the wheels are of cast iron, japanned. The stuffing-boxes of inside screw valves are fitted with driving glands; outside screw valves have bolt followers. All stuffing-boxes are packed ready for use. The trimmings are finished.

We furnish them with screw ends or with plain or tongued flange ends. Unless otherwise ordered, we thread the ends of screw end valves for the size of pipe corresponding to the size of valve, in common with the rest of our product. When the valves are to be used in connection with "double extra strong" pipe or "hydraulic tubing," which has a bore much smaller than "standard" or "extra strong" pipe of the same nominal size, we recommend a valve one size smaller than the pipe. This leaves the opening through the valve larger than the bore of the pipe. The ends of the valves are especially designed for threading for one size larger pipe.

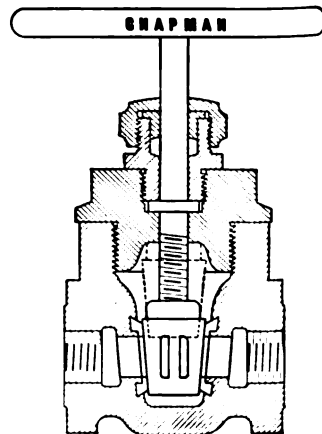


FIG. 76  
SECTION

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 17

PRICE LIST OF SPECIAL EXTRA HEAVY BRONZE GATE VALVES FOR WATER AND AIR

SCREW OR FLANGE ENDS

DIAMETER OF PORT		INCHES	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2
Screw End,	Inside Screw						\$49.00		\$72.50	
Flange End,	" "									
Screw End,	Outside Screw									
Flange End,	" "									
Weight, Screw End,	Inside Screw, lbs.						63		104	
Weight, Flange End,	" " "									
Weight, Screw End,	Outside Screw, "									
Weight, Flange End,	" " "									

## SPECIAL BRONZE VALVES

---

In addition to the regular lines of bronze valves in Lists 1 to 17 we make many special valves for various purposes and for either lower, intermediate or higher pressures than those given in the lists. The accompanying cuts illustrate several valves of this kind.

The first three cuts show different views of a special 12-inch, extra heavy pattern, all-bronze valve made for one of the Russian battleships.

This valve is used under 256 pounds working steam pressure and is made entirely of bronze, including bolts, nuts, studs, etc. It was tested and made tight under 500 pounds hydraulic pressure. As the cuts show, one end of the valve is much shorter than the other and the by-pass pipes are of special design to admit of this.

The fourth cut shows a ribbed valve especially designed for 2,500 pounds working water pressure.

We have an extensive line of patterns for special valves and are prepared to meet promptly the requirements in almost every case. We solicit correspondence regarding such work.



PERSPECTIVE

FIG. 77

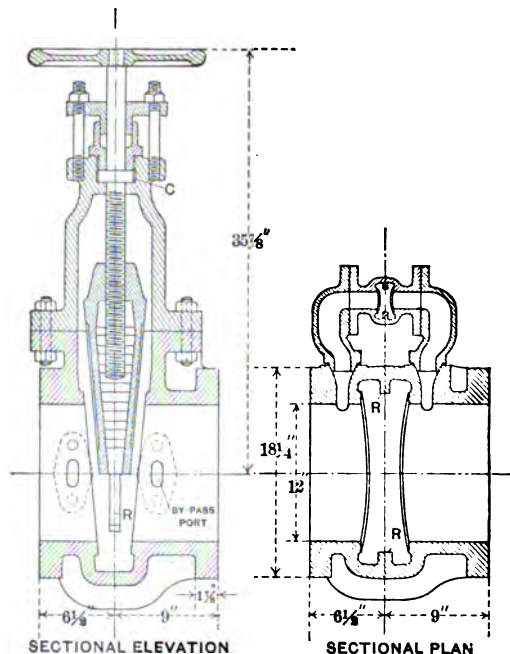


FIG. 78

FIG. 79

12 IN. EXTRA HEAVY ALL-BRONZE VALVE WITH BY-PASS

### SOME SPECIAL BRONZE VALVES

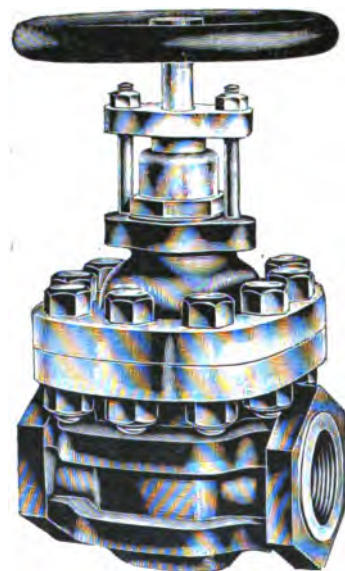


FIG. 80

RIBBED VALVE  
FOR  
2,500 LBS. WKG. PRESSURE





SECTION II.

CHAPMAN IRON BODY GATE VALVES  
WITH  
BABBITT METAL SEATS AND BRONZE MOUNTINGS  
FOR  
WATER, STEAM, OIL, ETC.



**IRON BODY BOLT TOP GATE VALVES FOR WATER AND STEAM****INSIDE OR OUTSIDE SCREW****SCREW OR FLANGE ENDS****BABBITT SEATS AND BRONZE MOUNTINGS****2½ IN. TO 10 IN.—150 POUNDS WORKING WATER PRESSURE****12 IN. TO 20 IN.—75 POUNDS WORKING WATER PRESSURE****22 IN. TO 48 IN.—50 LBS. WORKING WATER PRESSURE**

---

These valves are suitable for low pressure water and steam lines, such as pump suction lines, water wheel work, sewage, irrigation and oil systems, exhaust and condenser piping, etc. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of water hammer and expansion. The temperature should not exceed 325 degrees Fahrenheit.

The valves have iron bodies, caps and wheels; iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. The stuffing-boxes of the inside screw valves 16 inches and less in size have screw packing-nuts; all other valves have bolt follower stuffing-boxes. All stuffing-boxes are packed ready for use.

We furnish the inside screw valves with the Chapman Navy Indicator in the smaller sizes up to 18 inches and with the Chapman Geared Indicator in the larger sizes, or with bevel or spur gearing at an additional cost. The outside screw valves are made in any size desired and can also be supplied with gearing at an extra cost.

Valves 26 inches and larger have the sediment plow in the plug, as shown by Fig. 103.

**FOR COMPANION FLANGES SEE LIST 66**

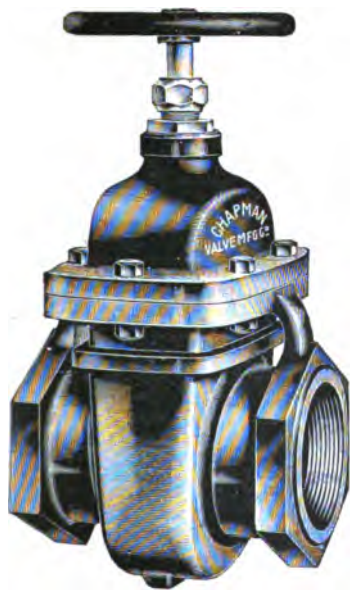


FIG. 100  
SCREW END  
INSIDE SCREW

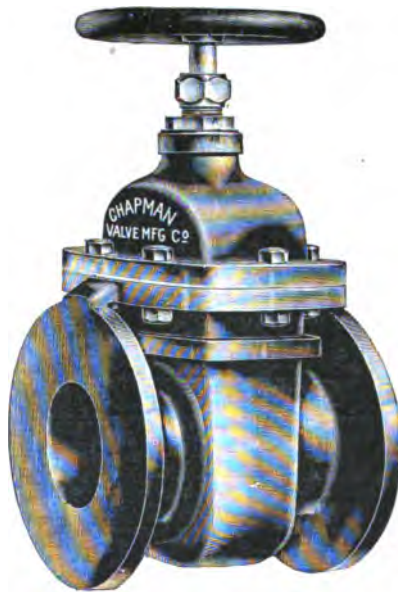


FIG. 101  
FLANGE END  
INSIDE SCREW

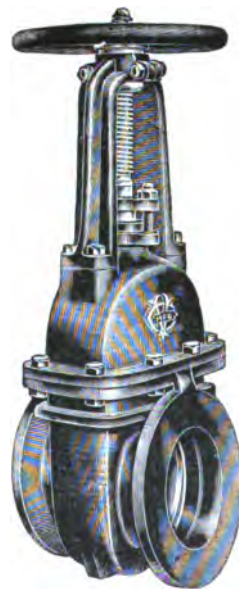


FIG. 102  
FLANGE END  
OUTSIDE SCREW

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES FOR WATER AND STEAM



CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 21

PRICE LIST OF IRON BODY BRONZE MOUNTED GATE VALVES FOR LOW PRESSURE WATER AND STEAM

SCREW OR FLANGE ENDS

SABBITT METAL SEATS

DIAMETER OF PORT		INCHES	2½	3	3½	4	4½	5	6	7	8	9	10	12	14	15
Screw End,	Ins. Ser.		\$8.40	\$10.85	\$13.00	\$15.75	\$18.00	\$20.75	\$25.75	\$33.00	\$42.00	\$52.50	\$62.00	\$84.50		
Flange End,	" "		8.75	11.25	13.50	16.00	17.50	20.50	25.00	31.50	40.00	49.00	59.00	77.00	\$99.00	\$121.00
Navy Indicator,	" " , Extra		2.50	2.60	2.60	2.75	3.00	3.00	4.00	4.60	5.00	6.00	6.00	7.00	8.00	10.00
Geared Indicator,	" " , "										11.00	11.00	11.00	11.00	11.00	11.00
Sliding Stem and Lever,	" "		2.10	2.50	3.25	3.25	3.75	3.75	5.00	5.00	8.75	8.75	10.25	11.60		
Spur Gearing,	Ins. Ser. "															
Revel Gearing,	" " , "															
Screw End,	Outs. Ser.		11.00	17.00	21.00	24.50	28.00	31.00	38.50	46.00	59.00	69.50	82.50	105.00		
Flange End,	" "		14.50	17.25	21.50	24.75	27.75	31.00	38.00	44.75	57.50	66.50	80.00	97.00	118.00	151.00
Drilling Flanges,	" "		.16	.16	.16	.16	.16	.20	.25	.35	.40	1.10	1.40	2.00	2.50	3.10
Weight, Ser. End,	Ins. Ser. , lbs.		29	44	50	77	86	99	130	178	239	301	373	503		
Weight, Flg. End,	" " "		37	54	65	85	88	108	135	199	248	307	370	556	678	819
Weight, Ser. End,	Outs. Ser. , "		36	52	64	95	109	121	159	210	306	356	441	552		
Weight, Flg. End,	" " "		44	62	79	103	111	130	164	231	315	362	438	605	777	924
Weight, Gearing,	Extra, "															

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 21  
CONTINUED

PRICE LIST OF IRON BODY BRONZE MOUNTED GATE VALVES FOR LOW PRESSURE WATER AND STEAM

SCREW OR FLANGE ENDS

BABBITT METAL SEATS

DIAMETER OF PORT	INCHES	16	18	20	22	24	26	28	30	36	40	42	48
Flange End, Ins. Scr.		\$125.00	\$162.00	\$201.00	\$242.00	\$279.00	\$337.00		\$518.00	\$724.00	\$1073.00	\$1169.00	\$1597.00
Navy Indicator, " " Extra		11.00	19.00										
Geared Indicator, " " "		11.00	11.00	11.00	11.00	11.00	11.00		11.00	11.00	11.00	11.00	11.00
By-Pass, " " "				30.00			48.00		48.00	48.00	70.00	70.00	100.00
Spur Gearing, " " "			34.00	42.00	44.00	51.00	51.00		51.00	52.00	61.00	61.00	102.00
Bevel Gearing, " " "			33.00	37.00	40.00	44.00	44.00		44.00	48.00	59.00	59.00	100.00
Flange End, Outs. Scr.		154.00	198.00	239.00	284.00	327.00	386.00		596.00				
By-Pass, " " "				36.00			59.00		59.00	*			
Drilling Flanges, "		3.75	4.35	5.40	6.35	7.35	9.75		11.00	13.50	16.25	19.00	21.50
Weight, Flg. End, Ins. Scr., lbs.		852	1190	1563	1959	2190	2750		4275	5600	8400	8800	12500
Weight, Flg. End, Outs. Scr., "		945	1322	1708	2109	2356	2950		4525				
Weight, By-Pass, Extra, "				178			309		309				
Weight, Gearing, " " "			95	135	139	150	150		220	230			



FIG. 103

### WATER VALVES WITH PLOW-SHAPED GUIDES ON PLUGS

---

Large water valves, particularly for underground work, are usually placed with the main spindle in a horizontal position or "arranged to lie on side." In many cases the mud or sediment in the water collects in the bottom of the valve body, obstructing the movement of the plug or gate.

To guard against this we make the larger sizes (26 inches and above) of our flange and bell end water valves in Lists 21, 22, 24, 25, 29 and 30 with a plow-shaped or pointed guide on the plug, as shown in the accompanying cut. This plow loosens the sediment, forces it away from the rib or spline and allows the water to wash it out of the valve. This entirely obviates any trouble from this source.

Smaller valves fitted with this device when ordered.

## IRON BODY BOLT TOP GATE VALVES FOR WATER

INSIDE OR OUTSIDE SCREW

BELL OR SPIGOT ENDS

BABBITT SEATS AND BRONZE MOUNTINGS

3 IN. TO 10 IN.—150 POUNDS WORKING PRESSURE

12 IN. TO 20 IN.—75 POUNDS WORKING PRESSURE

22 IN. TO 48 IN.—60 POUNDS WORKING PRESSURE



FIG. 104

INSIDE SCREW

These valves are suitable for low pressure water lines, such as street mains and branches, pump and condenser suctions, etc. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

They have iron bodies, caps and nuts; iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. The stuffing-boxes have bolt followers and are packed ready for use.

We furnish them with wheels instead of nuts on the spindles, if so ordered, without extra charge; and with indicator or bevel or spur gearing at an additional cost.

Unless otherwise ordered, they have 2-inch square nuts on the spindles and TURN TO RIGHT TO OPEN.

Valves 26 inches and larger have the sediment plow on the plug as shown by Fig. 103.

**CHAPMAN VALVE MANUFACTURING CO.**

**LIST NO. 22**

**PRICE LIST OF IRON BODY BRONZE MOUNTED GATE VALVES FOR WATER**

**BELL OR SPIGOT ENDS**

**BABBITT METAL SEATS**

DIAMETER OF PORT INCHES	3	4	5	6	7	8	9	10	12	14	15	16
Bell End, Inside Screw	\$12.50	\$16.00	\$18.00	\$23.00	\$29.00	\$37.00	\$47.00	\$54.00	\$73.00	\$90.00	\$111.00	\$115.00
Spigot End, " "	12.50	16.00	18.00	23.00	29.00	37.00	47.00	54.00	76.00	94.00	115.00	120.00
Spur Gearing, " " Extra												
Bevel Gearing, " " "												
Geared Indicator, " "												
Extra for Outside Screw	6.00	8.75	10.50	13.00	13.00	17.00	17.00	20.50	20.50	19.00	30.00	30.00
Weight, Bell End, Ins. Scr., lbs.	55	92	112	144	186	248	319	369	540	659	817	849
Weight, Spigot End, " " "	55	92	112	146	186	259	319	384	590	714	892	944
Weight, Gearing, Extra, " "												
DIAMETER OF PORT, CONTINUED	18	20	22	24	26	28	30	36	40	42	48	
Bell End, Inside Screw	\$153.00	\$186.00	\$227.00	\$265.00	\$315.00		\$477.00	\$690.00	\$1058.00	\$1152.00	\$1573.00	
Spigot End, " "	158.00	192.00	233.00	271.00								
Spur Gearing, " " Extra	34.00	42.00	44.00	51.00	51.00		51.00	52.00	61.00	61.00	102.00	
Bevel Gearing, " " "	33.00	37.00	40.00	44.00	44.00		44.00	48.00	59.00	59.00	100.00	
By-Pass, " " "					48.00		48.00	48.00	70.00	70.00	100.00	
Geared Indicator, " "	11.00	11.00	11.00	11.00	11.00		11.00	11.00	11.00	11.00	11.00	
Extra for Outside Screw	36.00	38.00	43.00	48.00	49.00		77.00					
Weight, Bell End, Ins. Scr., lbs.	1137	1416	1900	2119	2630		3925	5400	8400	8800	12500	
Weight, Spigot End, " " "	1223	1506	1995	2219								
Weight, By-Pass, Extra, " "					289		289	289				
Weight, Gearing, " " "	95	135	139	150	150		220	230				

## IRON BODY BOLT TOP ANGLE GATE VALVES FOR WATER AND STEAM

LIST NO. 23

SCREW OR FLANGE ENDS

INSIDE OR OUTSIDE SCREW

BABBITT SEATS AND BRONZE MOUNTINGS

2½ IN. TO 10 IN.—150 POUNDS WORKING WATER PRESSURE

12 IN. TO 18 IN.—75 POUNDS WORKING WATER PRESSURE

These valves are much more compact than an elbow and straight valve and save one joint in the pipe line; the angle ends are of good radius and offer but slight resistance to the flow.

These valves are suitable for low pressure water and steam lines, etc., such as pump suction, water wheel work, sewage, irrigation and oil systems, exhaust and condenser piping, etc. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. The working temperature should not exceed 325 degrees Fahrenheit.

The valves have iron bodies, caps and wheels; iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. Inside screw valves 16 inches and smaller in size have screw packing nut stuffing-boxes; all other valves have bolt follower boxes. All stuffing-boxes are packed ready for use.

We furnish the inside screw valves with the Chapman Navy indicator and both inside and outside screw valves with gearing, at an additional cost.



FIG. 105  
FLANGE END—INSIDE SCREW

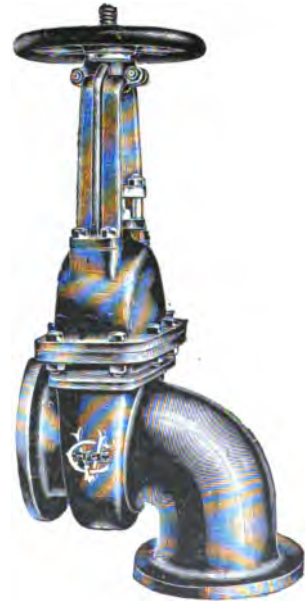


FIG. 106  
FLANGE END—OUTSIDE SCREW

FOR COMPANION FLANGES SEE LIST 68

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 23

PRICE LIST OF IRON BODY BRONZE MOUNTED ANGLE GATE VALVES FOR LOW PRESSURE WATER AND STEAM

SCREW OR FLANGE ENDS

BABBITT METAL SEATS

DIAMETER OF PORT		INCHES	2½	3	3½	4	4½	5	6	7
Screw End,	Inside Screw		\$10.00	\$13.00	\$16.00	\$19.50	\$22.00	\$26.00	\$33.00	\$43.50
Flange End,	" "		11.00	14.50	17.50	18.00	20.00	24.00	29.00	36.00
Navy Indicator,	" " , Extra		2.50	2.60	2.60	2.75	3.00	3.00	4.00	4.00
Geared Indicator,	" " , "									
Sliding Stem and Lever,	" " , "		2.10	2.50	3.25	3.25	3.75	3.75	5.00	5.00
Spur Gearing,	" " , "									
Bevel Gearing,	" " , "									
Screw End,	Outside Screw		16.00	19.00	24.00	28.00	32.00	36.50	46.00	56.50
Flange End,	" "		17.00	20.50	25.50	26.50	30.00	34.50	42.00	49.00
Drilling Flanges,	"		.16	.16	.16	.16	.16	.20	.25	.35
Weight, Screw End,	Inside Screw		32	49	56	84	95	112	146	191
Weight, Flange End,	" "		40	59	70	93	96	120	150	218
Weight, Screw End,	Outside Screw		39	57	70	102	118	134	175	223
Weight, Flange End,	" "		47	67	84	111	119	142	179	250
Weight, Gearing,	"									

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 23  
CONTINUED

PRICE LIST OF IRON BODY BRONZE MOUNTED ANGLE GATE VALVES FOR LOW PRESSURE WATER AND STEAM

SCREW OR FLANGE ENDS

ABBOTT METAL SEATS

DIAMETER OF PORT	INCHES	8	9	10	12	14	15	16	18
Screw End, Inside Screw		\$54.50	\$67.00	\$79.00	\$103.00				
Flange End, " "		45.00	55.00	66.00	88.00	\$117.00		\$147.00	
Navy Indicator, " " , Extra		5.00	6.00	6.00	7.00	8.00	\$10.00	11.00	\$19.00
Geared Indicator, " " , "		11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
Sliding Stem and Lever, "		8.75	8.75	10.25	11.60				
Spur Gearing, " " , "									34.00
Bevel Gearing, " " , "									33.00
Screw End, Outside Screw		71.50	84.00	100.00	123.00				
Flange End, " " ,		62.50	72.00	87.00	108.00	136.00		175.00	
Drilling Flanges, "		.40	1.10	1.40	2.00	2.50	3.10	3.75	4.35
Weight, Screw End, Inside Screw		273	346	423	588				
Weight, Flange End, " "		278	341	411	637	830		1040	
Weight, Screw End, Outside Screw		340	401	491	637				
Weight, Flange End, " "		345	396	479	686	929		1133	
Weight, Gearing, "									95



# IRON BODY BOLT TOP GATE VALVES FOR WATER AND STEAM

## INSIDE OR OUTSIDE SCREW

### SCREW OR FLANGE ENDS

2½ IN. TO 16 IN.—150 POUNDS WORKING WATER PRESSURE

26 IN. TO 48 IN.—90 POUNDS WORKING WATER PRESSURE

### BABBITT SEATS AND BRONZE MOUNTINGS

16 IN. TO 24 IN.—125 POUNDS WORKING WATER PRESSURE

2½ IN. TO 48 IN.—80 POUNDS WORKING STEAM PRESSURE

These valves are suitable for water, steam and oil lines and for low pressure lines, such as exhaust and condenser piping, pump, suction, sewage and irrigation systems, etc., where additional strength is required to resist the stresses of expansion and contraction. They are extensively used on the receiver piping of compound and triple expansion engines. The inside screw indicator valves and the outside screw valves are especially suitable for automatic sprinkler systems, piping around Underwriter Pumps, etc., the outside screw valves being specified for this purpose by the Inspectors of Fire Insurance Companies.

The valves are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. The temperature should not exceed 325 degrees Fahrenheit. They have iron bodies, caps and wheels; iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. Inside screw valves 16 inches and smaller in size have screw packing-nut stuffing-boxes; all other valves have bolt follower boxes. All stuffing-boxes are packed ready for use.

We furnish the inside screw valves with indicator (Navy indicator for sizes 18 inches and less; Geared indicator for larger valves) or gearing at an additional cost. Outside screw valve may also be geared.

Either inside or outside screw valves can be supplied with by-pass. Valves 26 inches and larger have the sediment plow on the plug shown by Fig. 103.

FOR COMPANION FLANGES SEE LIST 68



FIG. 107  
SCREW END  
INSIDE SCREW



FIG. 108  
FLANGE END  
NAVY INDICATOR



FIG. 109  
FLANGE END  
INSIDE SCREW



FIG. 110  
FLANGE END  
OUTSIDE SCREW

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES FOR WATER AND STEAM

## PRICE LIST OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

SCREW OR FLANGE ENDS

DIAMETER OF PORT	INCHES	2½	3	3½	4	4½	5	6	7	8	9	10	12	14
Screw End, Inside Screw		\$8.40	\$10.85	\$13.00	\$15.75	\$18.00	\$20.75	\$25.75	\$33.00	\$42.00	\$52.50	\$62.00	\$85.00	
Flange End; " "		8.75	11.25	13.50	16.00	17.50	20.50	25.00	31.50	40.00	49.00	59.00	77.00	\$102.00
Screw End with Navy Indicator		11.00	13.50	15.50	18.50	21.00	24.00	30.00	37.50	47.00	58.00	70.50	92.00	
Flange End with Navy Indicator		11.25	14.00	16.00	18.75	20.50	23.50	29.00	36.00	45.00	55.00	65.00	84.00	110.00
Geared Indicator, Extra										11.00	11.00	11.00	11.00	11.00
Sliding Stem and Lever, " "		2.10	2.50	3.25	3.25	3.75	3.75	5.00	5.00	8.75	8.75	10.25	11.60	
Spur Gearing, " "														
Bevel Gearing " "														
Screw End, Outside Screw		14.00	17.00	21.00	24.50	28.00	31.00	38.50	46.00	59.00	69.00	82.50	105.00	
Flange End, " "		14.50	17.25	21.50	24.75	27.75	31.00	38.00	44.75	57.50	66.50	80.00	97.00	120.00
Drilling Flanges, Extra		.16	.16	.16	.16	.16	.20	.25	.35	.40	1.10	1.40	2.00	2.50
Weight, Screw End, Inside Screw, lbs.		29	44	50	77	86	99	130	178	239	301	373	506	
Weight, Flange End, " " , "		37	54	65	85	88	108	135	199	248	307	370	559	711
Weight, Screw End with Indicator, " "		32	48	54	81	92	106	138	196	248	311	383	519	
Weight, Flange End, with Indicator, " "		40	58	69	89	94	115	143	207	257	317	380	572	728
Weight, Screw End, Outside Screw, " "		36	52	64	95	109	121	159	210	306	356	441	555	
Weight, Flange End, " " , "		44	62	79	103	111	130	164	231	315	362	438	608	810
Weight, Gearing, Extra, " "														

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 24  
CONTINUED

PRICE LIST OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

SCREW OR FLANGE ENDS

DIAMETER OF PORT INCHES	15	16	18	20	22	24	26	28	30	36	40	42	48
Flange End, Ins. Scr.	\$125.00	\$130.00	\$169.00	\$211.00	\$252.00	\$295.00	\$370.00		\$560.00	\$780.00	\$1128.00	\$1223.00	\$1662.00
Flg. E. with Navy Indicator	135.00	141.00	188.00										
Geared Indicator, Extra			11.00	11.00	11.00	11.00	11.00		11.00	11.00	11.00	11.00	11.00
By-Pass, "				30.00			48.00		48.00	48.00	70.00	70.00	100.00
Spur Gearing, "			34.00	42.00	44.00	51.00	51.00		51.00	52.00	61.00	61.00	102.00
Bevel Gearing, "			33.00	37.00	40.00	44.00	44.00		44.00	48.00	59.00	59.00	100.00
Flange End, Outs. Scr.	155.00	159.00	205.00	249.00	295.00	343.00	419.00		638.00				
By-Pass, " , Extra				36.00			59.00		59.00				
Drilling Flanges, "	3.10	3.75	4.35	5.40	6.35	7.35	9.75		11.00	13.50	16.25	19.00	21.50
Wgt., Flg. E., Ins. Scr., lbs.	874	932	1297	1715	2144	2442	3255		4920	6500	9225	9650	13500
Wgt., Flg. E. with Indic'r, "	880	942	1301										
Wgt., Flg. E., Outs. Scr., "	979	1025	1429	1860	2294	2608	3455		5170				
Wgt., By-Pass, Extra, "				170			289		289	289	515	530	766
Weight, Gearing, " "			95	135	139	150	150		220	230	260	260	525

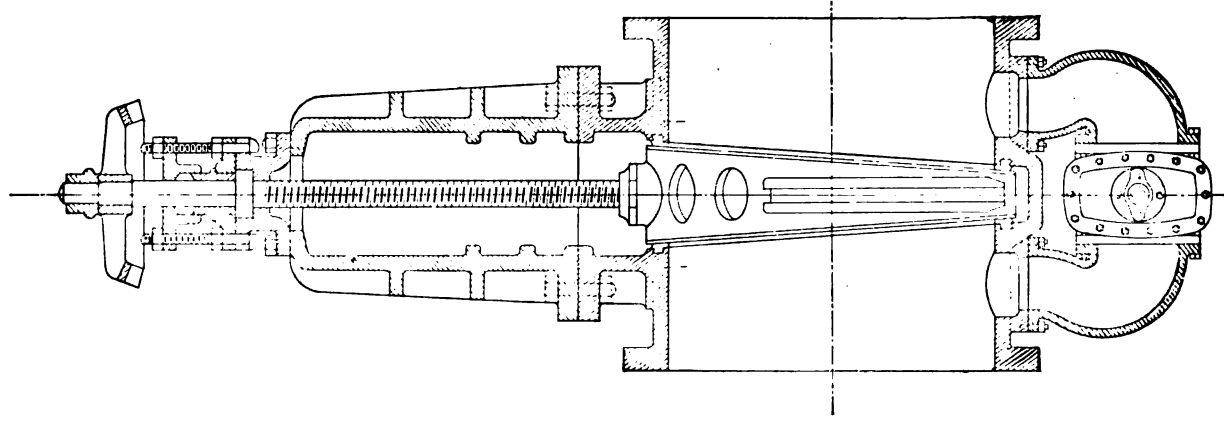


FIG. III

SECTION OF VALVE WITH BY-PASS AND BEVEL GEARING

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES  
FOR WATER AND STEAM

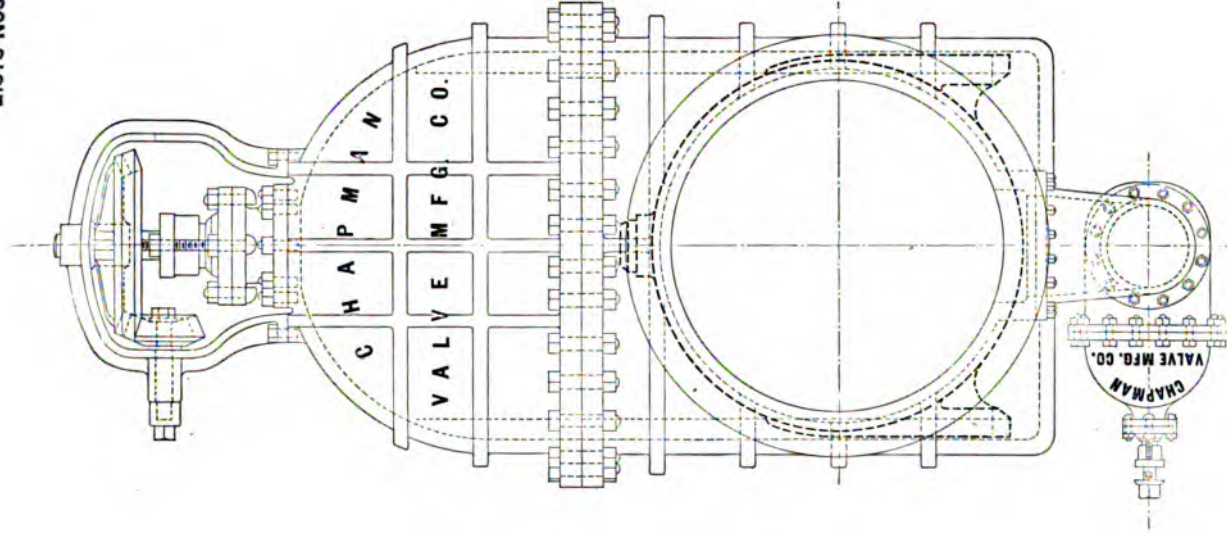


FIG. 112

ELEVATION OF VALVE WITH BY-PASS AND BEVEL GEARING

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES  
FOR WATER AND STEAM

## IRON BODY BOLT TOP GATE VALVES FOR WATER

INSIDE OR OUTSIDE SCREW

BELL OR SPIGOT ENDS

BABBITT SEATS AND BRONZE MOUNTINGS

3 TO 24 IN.—150 POUNDS WORKING PRESSURE

26 TO 48 IN.—100 POUNDS WORKING PRESSURE

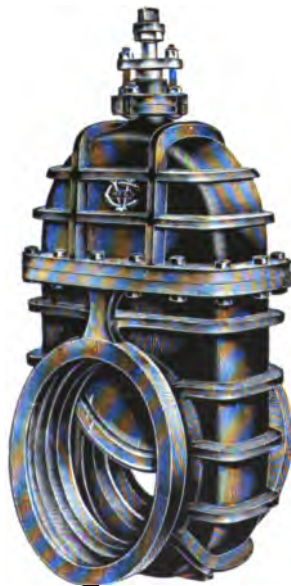


FIG. 113  
INSIDE SCREW

These valves are made especially for use on the street mains of water-works systems and will be found to answer every requirement. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

They have iron bodies, caps and nuts; iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. The stuffing-boxes have bolt followers and are packed ready for use.

We furnish these valves with wheels instead of nuts on the spindles, if so ordered, without extra charge and with geared indicator, bevel or spur gearing or by-pass valve at an additional cost.

Unless otherwise ordered, they have 2-inch square nut on the spindle and **TURN TO RIGHT TO OPEN.**

Valves 26 inches and larger have the sediment plow on the plug as shown by Fig. 103.

We advise by-pass on all valves 20 inches and larger in size, and gearing on all valves 30 inches or larger.

Outside screw valves are extensively used on fire-protection systems.

**CHAPMAN VALVE MANUFACTURING CO.**

**LIST NO. 25**

**PRICE LIST OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER**

**BELL OR SPIGOT ENDS**

DIAMETER OF PORT		INCHES	3	4	5	6	7	8	9	10	12	14	15	16
Bell End,	Inside Screw		\$12.50	\$16.00	\$18.00	\$23.00	\$29.00	\$37.00	\$47.00	\$54.00	\$73.00	\$92.00	\$114.00	\$119.00
Spigot End,	" "		12.50	16.00	18.00	23.00	29.00	37.00	47.00	55.00	77.00	96.00	118.00	124.00
Spur Gearing,	" " Extra													
Bevel Gearing,	" " "													
Geared Indicator,	" "													11.00
Bell End,	Outside Screw		18.50	24.50	28.50	35.50	42.00	54.50	64.00	74.50	94.00	111.00	144.00	149.00
Weight, Bell End,	Inside Screw, lbs.		55	92	112	144	186	248	319	369	543	687	872	915
Weight, Bell End,	Outside Screw, "		63	110	134	173	218	315	374	437	592	767	977	1008
Weight, Gearing,	Extra, "													
DIAMETER OF PORT, CONTINUED		INCHES	18	20	22	24	26	28	30	36	40	42	48	
Bell End,	Inside Screw		159.00	197.00	238.00	290.00	350.00		520.00	750.00	1110.	1200.	1638.	
Spigot End,	" "		165.00	203.00	245.00	298.00								
Spur Gearing,	" " Extra		34.00	42.00	44.00	51.00	51.00		51.00	52.00	61.00	61.00	102.00	
Bevel Gearing,	" " "		33.00	37.00	40.00	44.00	44.00		44.00	48.00	59.00	59.00	100.00	
By-Pass,	" " "			30.00			48.00		48.00	48.00	70.00	70.00	100.00	
Geared Indicator,	" "		11.00	11.00	11.00	11.00	11.00		11.00	11.00	11.00	11.00	11.00	
Bell End,	Outside Screw		195.00	235.00	281.00	339.00	398.00		597.00					
Weight, Bell End,	Inside Screw, lbs.		1245	1591	2079	2550	3140		4575	6325	9225	9650	13500	
Weight, Bell End,	Outside Screw, "		1377	1736	2229	2716	3340		4825					
Weight, Gearing,	Extra, "		95	135	139	150	150		220	230	260	260	525	
Weight, By-Pass,	" "			170			289		289	289	515	530	766	



# IRON BODY BOLT TOP ANGLE GATE VALVES FOR WATER AND STEAM

LIST NO. 28

SCREW OR FLANGE ENDS

INSIDE OR OUTSIDE SCREW

BABBITT SEATS AND BRONZE MOUNTINGS

2 1/4 IN. TO 16 IN.—150 POUNDS WORKING WATER PRESSURE

16 IN. AND 18 IN.—125 POUNDS WORKING WATER PRESSURE

2 1/4 IN. TO 16 IN.—80 POUNDS WORKING STEAM PRESSURE



FIG. 114  
FLANGE END—INSIDE SCREW

These valves are much more compact than an elbow and straight valve and save one joint in the pipe line; the angle ends are of good radius and offer but slight resistance to the flow.

They are suitable for water and steam lines and low pressure lines, such as pump suction, exhaust and condenser piping, sewage and irrigation systems, etc., where additional strength is required to resist the stresses of expansion and contraction, etc. They are largely used on the receiver piping of compound and triple expansion engines. They are designed for the above working pressures and have a factor of safety amply large to resist the stresses of expansion and water hammer. The temperature should not exceed 325 degrees Fahrenheit, corresponding to saturated steam of 80 pounds gage-pressure.

These valves have iron bodies, caps and wheels; iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. Inside screw valves 16 inches and smaller have screw packing-nut stuffing-boxes; all other valves have bolt follower boxes. All stuffing-boxes are packed ready for use. We furnish the inside screw valves with indicator and either inside or outside screw valves with gearing or by-pass valve at an additional cost.

FOR COMPANION FLANGES SEE LIST 68



FIG. 115  
FLANGE END—OUTSIDE SCREW

**CHAPMAN VALVE MANUFACTURING CO.**

**LIST NO. 26**

**PRICE LIST OF IRON BODY BRONZE MOUNTED ANGLE GATE VALVES FOR WATER AND STEAM**

**SCREW OR FLANGE ENDS**

**BRASS METAL SEATS**

DIAMETER OF PORT		INCHES	2½	3	3½	4	4½	5	6	7
Screw End,	Inside Screw		\$10.00	\$13.00	\$16.00	\$19.50	\$22.00	\$26.00	\$33.00	\$43.50
Flange End,	" "		11.00	14.50	17.50	18.00	20.00	24.00	29.00	36.00
Navy Indicator,	Extra		2.50	2.50	2.50	3.00	3.00	3.00	4.00	5.00
Sliding Stem and Lever,	"		2.10	2.50	3.25	3.25	3.75	3.75	5.00	5.00
Screw End,	Outside Screw		16.00	19.00	24.00	28.00	32.00	36.50	46.00	56.50
Flange End,	" "		17.00	20.50	25.50	26.50	30.00	34.50	42.00	49.00
Drilling Flanges,	Extra		.16	.16	.16	.16	.16	.20	.25	.35
Weight, Screw End,	Inside Screw, lbs.		32	49	56	84	95	112	146	191
Weight, Flange End,	" " "		40	59	70	93	96	120	150	218
Weight, Screw End,	Outside Screw, "		39	57	70	102	118	134	175	223
Weight, Flange End,	" " "		47	67	84	111	119	142	179	250
DIAMETER OF PORT, CONTINUED		INCHES	8	9	10	12	14	15	16	18
Screw End,	Inside Screw		\$54.50	\$67.00	\$79.00	\$103.00				
Flange End,	" "		45.00	55.00	66.00	88.50	\$119.00		\$152.00	
Navy Indicator,	Extra		5.00	6.00	6.00	7.00	8.00		11.00	
Sliding Stem and Lever,	"		8.75	8.75	10.25	11.60				
Screw End,	Outside Screw		71.50	84.00	100.00	123.00				
Flange End,	" "		62.50	72.00	87.00	109.00	138.00		181.00	
Drilling Flanges,	Extra		.40	1.10	1.40	2.00	2.50		3.75	4.35
Weight, Screw End,	Inside Screw, lbs.		273	346	423	591				
Weight, Flange End,	" " "		278	341	411	640	863		1120	
Weight, Screw End,	Outside Screw, "		340	401	491	640				
Weight, Flange End,	" " "		345	396	479	689	962		1213	

**\*IRON BODY AUTOMATIC DRIP OR STOP-AND-WASTE GATE VALVES**

SCREW, FLANGE OR BELL ENDS

INSIDE SCREW

BABBITT SEATS AND BRONZE MOUNTINGS

200 POUNDS WORKING PRESSURE

In many cases it is desirable to drain the water out of a pipe after the supply has been cut off by closing the main valve. To avoid the expense and uncertainty of a separate valve for this purpose we have incorporated in our valve an automatic drip which answers every requirement of moderate cost, simplicity and positive action.

The construction and operation is as follows: The hollow plug or gate is guided in our usual manner by grooves in the edges which engage with ribs or splines in the body. In the wider of these grooves is a bronze plate or gib accurately fitted to the face of the rib; this gib moves up and down with the plug and alternately covers and uncovers a brass bushed drip hole in the valve body. A hole in one face of the hollow plug allows the water to drain out of the pipe when the valve is closed. The drip is entirely automatic in its action and is operated by the direct action of the plug without intermediate mechanism. It is so arranged that the moment the plug commences to rise the drip outlet is sealed and remains sealed until the valve is closed. The drip is always open when the valve is closed, insuring perfect drainage.

The valves have iron bodies, caps and wheels; all-bronze or bronze-faced plugs and babbitt metal seats. The stuffing-boxes have screw packing-nuts and are packed ready for use.

If desired, we furnish the screw and flange end valves with T heads or square nuts on the spindles without extra charge. Bell end valves have bolt gland and follower stuffing-boxes, are provided with 2 inch square nuts on the spindles and arranged to TURN TO RIGHT TO OPEN unless specified.

Valves 2½ inches and larger have the drip outlet tapped for drain pipe; smaller valves have plain drip outlet unless specially ordered.

These valves are suitable for railroad water pipes, fire protection and street sprinkling stand pipes or for any purpose where a drip is desirable. When fitted with T heads or square nuts they are especially suitable for use as stop-and-waste valves for the house pipes of water works and plumbing systems.

They are designed for a working pressure of 200 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

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\*For bronze drip valves see List No. 9



FIG. 116

SCREW END—SCREW TOP

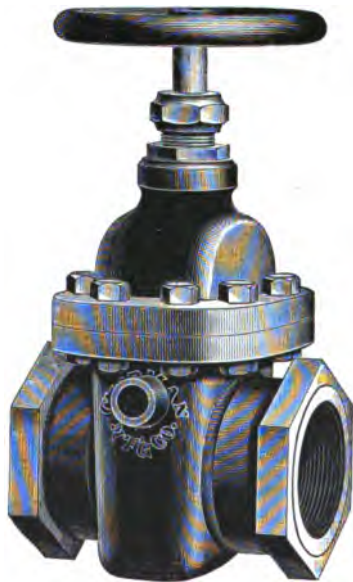


FIG. 117

SCREW END—BOLT TOP

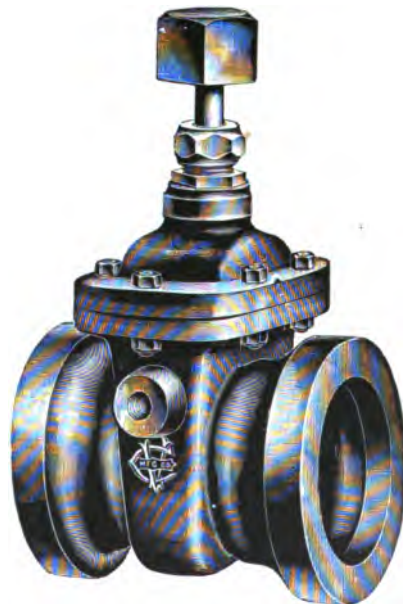


FIG. 118

BELL END—BOLT TOP

**IRON BODY BRONZE MOUNTED AUTOMATIC DRIP VALVES**

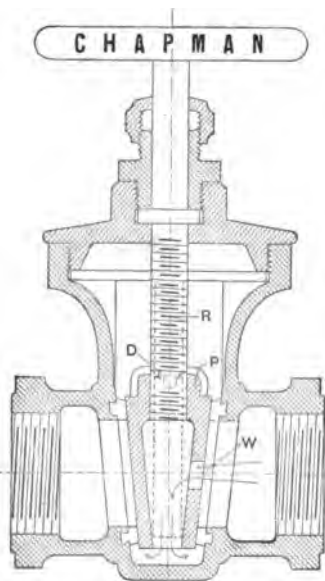


FIG. 119  
LONGITUDINAL SECTION  
SHOWING  
VALVE CLOSED AND DRIP OPEN

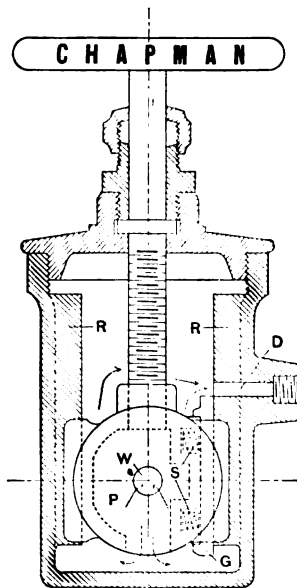


FIG. 120  
CROSS-SECTION  
SHOWING  
VALVE CLOSED AND DRIP OPEN

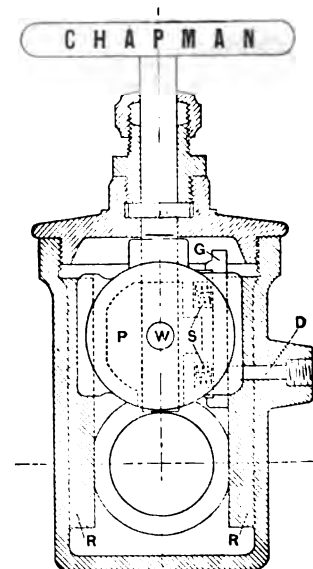


FIG. 121  
CROSS-SECTION  
SHOWING  
VALVE OPEN AND DRIP CLOSED

**IRON BODY BRONZE MOUNTED AUTOMATIC DRIP VALVES**

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 3

LIST NO. 27

PRICE LIST OF IRON BODY BRONZE MOUNTED BABBITT SEAT AUTOMATIC DRIP VALVES

SCREW, FLANGE, BELL OR SPIGOT ENDS

		SCREW TOP					BOLT TOP									
DIAMETER OF PORT	INCHES	1	1½	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10
Screw End		\$4.70	\$5.60	\$6.75	\$9.25	\$12.50	\$15.50	\$20.00	\$24.75	\$31.75	\$32.75	\$42.00	\$53.50	\$63.50		
Flange End		5.40	6.25	7.75	9.60	12.75	16.00	20.50	25.25	31.75	32.75	42.00	52.50	62.50		
Bell End							17.50		26.50		32.50	41.25	50.00	60.50		
Spigot End							17.50		26.50		32.50	41.25	50.00	60.50		
Drilling Flanges,	Extra	.35	.12	.12	.12	.16	.16	.16	.16	.16	.20	.25	.35	.40	1.10	1.40
Weight, Screw End,	lbs.	6½	8½	11	17	31	40	57	74	100	126	179	250	290		
Weight, Flange End,	"	8½	13	16	23	41	52	71	91	112	142	192	260	304		
Weight, Bell End,	"						51		126		147	205	254	310		
Weight, Spigot End,	"						51		126		147	207	254	321		

## IRON BODY SCREW TOP GATE VALVES FOR WATER, STEAM AND OIL

## INSIDE SCREW

## SCREW OR FLANGE ENDS

## BABBITT SEATS AND BRONZE MOUNTINGS

200 POUNDS WORKING WATER PRESSURE

80 POUNDS WORKING STEAM PRESSURE

These valves are suitable for steam and feed water lines, plumbing, steam and hot water heating, oil systems, etc. When equipped with T heads or nuts they are especially suitable for use as water works service valves. The cast iron bodies are stiffer and the spindles are larger than the bronze valves in Lists 1, 2, 3 and 4, and the valves will stand more hard usage. The seats and faces being of different metals, the plugs will not stick, even after long periods of disuse. They are designed for a working pressure of 200 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

The temperature should not exceed 325 degrees Fahrenheit, corresponding to saturated steam of 80 pounds gage pressure.

These valves have cast iron bodies, caps and wheels, bronze plugs, spindles and stuffing-boxes and special babbitt metal seats. The stuffing-boxes have screw packing-nuts and are packed ready for use.

We furnish these valves with T head or square nut on the spindle without extra charge and with quick thread, sliding stem and lever or Navy Indicator at an additional cost.

FOR COMPANION FLANGES SEE LIST 68



FIG. 122

SCREW END—INSIDE SCREW



FIG. 123

FLANGE END—INSIDE SCREW



FIG. 124

SCREW END—INSIDE SCREW  
WITH T HEAD

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES FOR WATER AND STEAM



CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 7

LIST NO. 28

PRICE LIST OF IRON BODY SCREW TOP BRONZE MOUNTED GATE VALVES FOR WATER AND STEAM

4 SCREW OR FLANGE ENDS

BARBITT SEATS

DIAMETER OF PORT		INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Screw End,	Inside Screw		\$2.20	\$2.20	\$2.35	\$2.75	\$3.30	\$3.75	\$4.75	\$6.25	\$9.00	\$11.75
Flange End,	" "				2.85	3.25	4.00	4.50	5.50	6.70	9.00	11.75
Screw End, with Indicator *							4.50	5.00	6.00	7.70	11.50	14.50
Flange End, with Indicator *							5.20	5.75	6.75	8.10	11.50	14.50
Sliding Stem and Lever,	Extra		.65	.65	.75	.80	.90	1.00	1.10	1.25	1.60	2.00
Screw End,	Outside Screw											
Flange End,	" "											
Drilling Flanges,	"						.35	.12	.12	.12	.16	.16
Weight, Screw End,	Inside Screw,	lbs.	2 $\frac{1}{4}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$	4	5 $\frac{1}{4}$	7 $\frac{3}{4}$	11	18	26	35
Weight, Flange End,	" "	"			4	5 $\frac{1}{2}$	8	11	17	22	32	48
Weight, Screw End,	Outside Screw,	"										
Weight, Flange End,	" "	"										

\*Indicator Valves have Navy Indicator 2 inch and smaller—Side Indicator 2 $\frac{1}{2}$  inch and larger.

## IRON BODY BOLT TOP GATE VALVES FOR WATER AND STEAM

## INSIDE OR OUTSIDE SCREW

## SCREW OR FLANGE ENDS

2½ IN. TO 12 IN.—200 POUNDS WORKING WATER PRESSURE.

26 IN. TO 48 IN.—160 POUNDS WORKING WATER PRESSURE.

## BABBITT SEATS AND BRONZE MOUNTINGS

14 IN. TO 24 IN.—175 POUNDS WORKING WATER PRESSURE.

2½ IN. TO 48 IN.—80 POUNDS WORKING STEAM PRESSURE.

These valves are suitable for water, steam and oil systems, and are made heavy and strong to resist the stresses of expansion and contraction, etc. They are largely used on the receiver piping of multiple-cylinder engines. The inside screw indicator valves and the outside screw valves are especially suitable for automatic sprinkler systems, piping around Underwriter pumps, etc.; the outside screw valves being specified by the Inspection Departments of Fire Insurance Companies for this purpose.

The valves are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. The temperature should not exceed 325 degrees Fahrenheit.

They have iron bodies, caps and wheels; bronze plugs or iron plugs with bronze faces; extra large bronze spindles and special babbitt metal seats. Inside screw valves 14 inches and smaller have screw packing nut stuffing-boxes; all other valves have bolt follower boxes. All stuffing-boxes are packed ready for use.

We furnish the inside screw valves with indicator, bevel or spur gearing, or with inside screw by-pass, at an additional cost; also with sliding stem and lever in the smaller sizes up to 14 inches. Outside screw valves are made in any size desired and may have gearing or outside screw by-pass, for which we charge extra.

We advise by-pass on all valves for heavy pressure 20 inches and larger in size.

FOR COMPANION FLANGES SEE LIST 68



FIG. 125  
SCREW END  
INSIDE SCREW



FIG. 126  
FLANGE END  
INSIDE SCREW



FIG. 127  
FLANGE END  
SIDE INDICATOR



FIG. 128  
SCREW END  
SLIDING STEM AND LEVER

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES FOR WATER AND STEAM



FIG. 129  
FLANGE END  
OUTSIDE SCREW

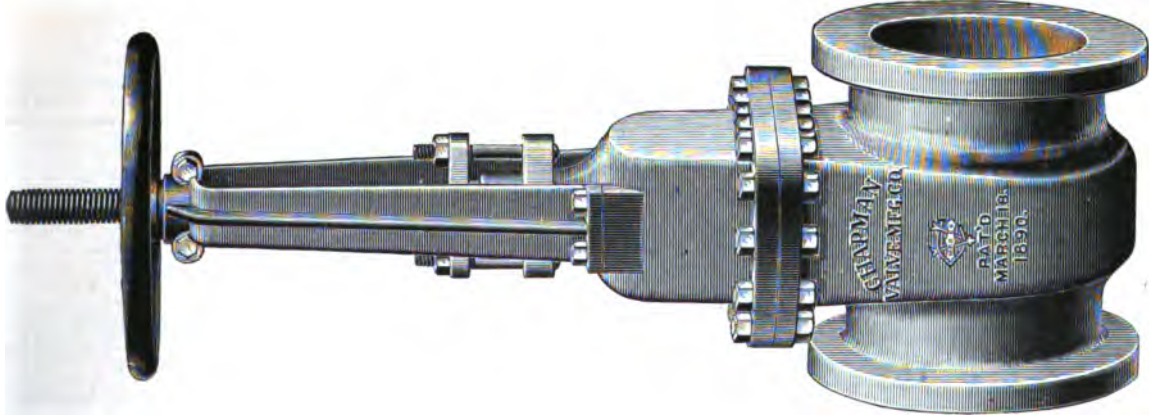


FIG. 130  
FLANGE END—OUTSIDE SCREW  
IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES  
FOR WATER AND STEAM

FORMER TABLES NOS. 8, 9 AND 19

LIST NO. 29

## PRICE LIST OF IRON BODY BABBITT SEAT GATE VALVES FOR STEAM AND WATER

SCREW OR FLANGE ENDS

DIAMETER OF PORT INCHES	2½	3	3½	4	4½	5	6	7	8	9	10	12	14	15
Screw End, Inside Screw	\$ 9.00	\$11.25	\$14.50	\$17.00	\$23.50	\$23.50	\$29.50	\$37.00	\$45.00	\$57.00	\$72.00	\$101.00		
Flange End, " "	9.25	11.75	15.00	17.50	23.50	23.50	28.25	34.50	42.50	53.50	67.00	89.00	\$118.00	\$145.00
Sliding Stem and Lever, Extra	2.10	2.50	3.25	3.25	3.75	3.75	5.00	5.00	8.75	8.75	10.25	11.60		
Geared Indicator, Ins. Screw, "									11.00	11.00	11.00	11.00	11.00	11.00
Navy Indicator, " " "	2.50	2.60	2.60	2.75	3.00	3.00	4.00	4.60	5.00	6.00	6.00	7.00	8.00	18.00
Spur Gearing, " " "														32.00
Bevel Gearing, " " "									25.00	27.00	28.00	29.00	29.00	31.00
Screw End, with Side Indicator	11.50	14.00	17.25	20.00	27.25	27.75	34.00	42.00	51.50	63.50	78.00	108.50		
Flange End, " " "	11.75	14.50	18.00	20.50	27.00	27.00	33.00	40.00	49.00	59.50	73.50	98.00	128.00	164.00
Screw End, Outside Screw	15.00	17.50	22.50	25.75	33.75	33.75	42.00	50.00	61.00	73.00	92.00	122.00		
Flange End, " " "	15.00	17.75	23.00	26.00	34.00	34.00	41.00	48.00	60.00	70.00	87.50	110.00	137.00	175.00
Drilling Flanges, Extra	.16	.16	.16	.16	.16	.20	.25	.35	.40	1.10	1.40	2.00	2.50	3.10
Weight, Scr. End, Ins. Scr., Lbs.	30	41	60	72	103	119	174	220	280	361	444	677		
Weight, Flg. End, " " "	42	51	74	84	117	133	186	245	291	373	453	661	870	1074
Weight, Scr. End Indicator, "	33	45	64	76	109	126	182	228	289	371	479	690		
Weight, Flg. " " , "	45	55	78	88	123	140	194	253	300	383	463	674	887	1080
Weight, Scr. End, Outs. Scr. "	37	49	74	90	126	141	203	252	347	416	537	726		
Weight, Flg. " " "	49	59	88	102	140	155	215	277	358	428	521	710	950	1179
Weight, Gearing, " Extra"									65	70	70	75	75	92

FORMER TABLES NOS. 8 AND 9

LIST NO. 29

CONTINUED

**PRICE LIST OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM**  
**SCREW OR FLANGE ENDS**

DIAMETER OF PORT	INCHES	16	18	20	22	24	26	28	30	36	40	42	48
Flange End, Ins. Scr.		\$155.00	\$210.00	\$250.00	\$290.00	\$370.00	\$435.00		\$658.00	\$900.00	\$1425.00	\$1530.00	\$2050.00
Geared Indicator, " " , Extra		11.00	11.00	11.00	11.00	11.00	11.00		11.00	11.00	11.00	11.00	11.00
Navy Indicator, " " , "		18.00	19.00										
By-Pass, " " , "		46.00	48.00	51.00	60.00	64.00	64.00		80.00	114.00	114.00	116.00	251.00
Spur Gearing, " " , "		33.00	39.00	43.00	44.00	58.00	58.00		58.00	61.00	109.00	109.00	113.00
Bevel Gearing, " " , "		32.00	35.00	39.00	40.00	50.00	50.00		50.00	59.00	107.00	107.00	111.00
Flange End with Side Indicator		174.00	231.00	276.00	320.00	403.00							
Flange End, Outs. Scr.		185.00	245.00	287.00	335.00	417.00	482.00		736.00				
By-Pass, " " , Extra		52.00	54.00	57.00	71.00	75.00	75.00		94.00				
Drilling Flanges, "		3.75	4.35	5.40	6.35	7.35	9.75		11.00	13.50	16.25	19.00	21.75
Weight, Flg. End, Ins. Scr., lbs.		1232	1675	1993	2364	3210	3720		5775	7500	11875	12270	16000
Weight, Flg. End, Indicator, "		1237	1679	1998	2370	3211							
Weight, Flg. End, Outs. Scr., "		1325	1807	2138	2514	3376	3920		6025				
Weight, By-Pass, Extra, "		310	345	370	488	530	530		700	1050	1050	1085	2450
Weight, Gearing, " "		92	133	135	135	220	220		230	235	525	525	530

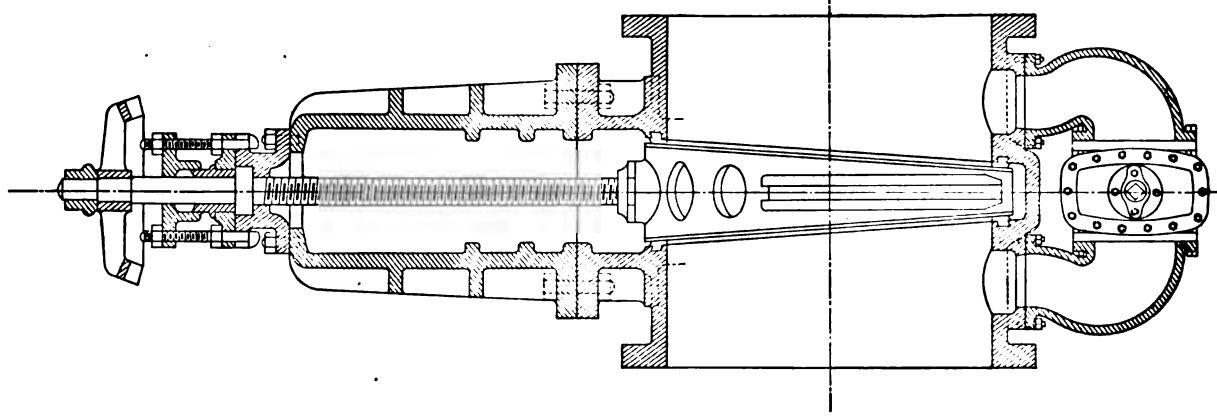


FIG. 131

CROSS-SECTION OF VALVE WITH RIBS AND BY-PASS

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES

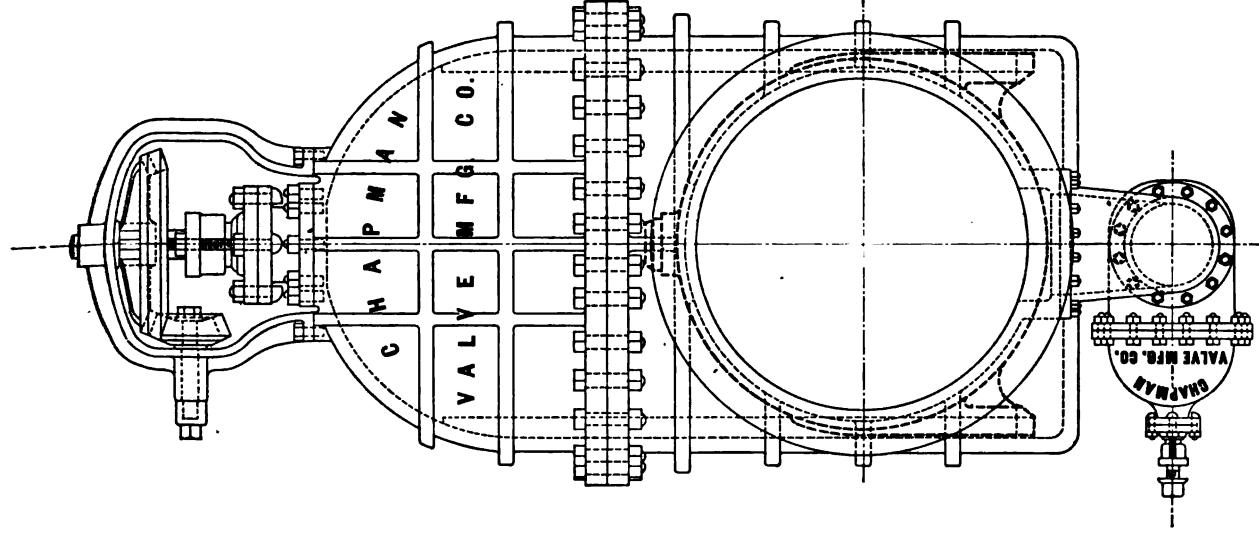


FIG. 132

END ELEVATION OF VALVE WITH RIBS AND BY-PASS

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES



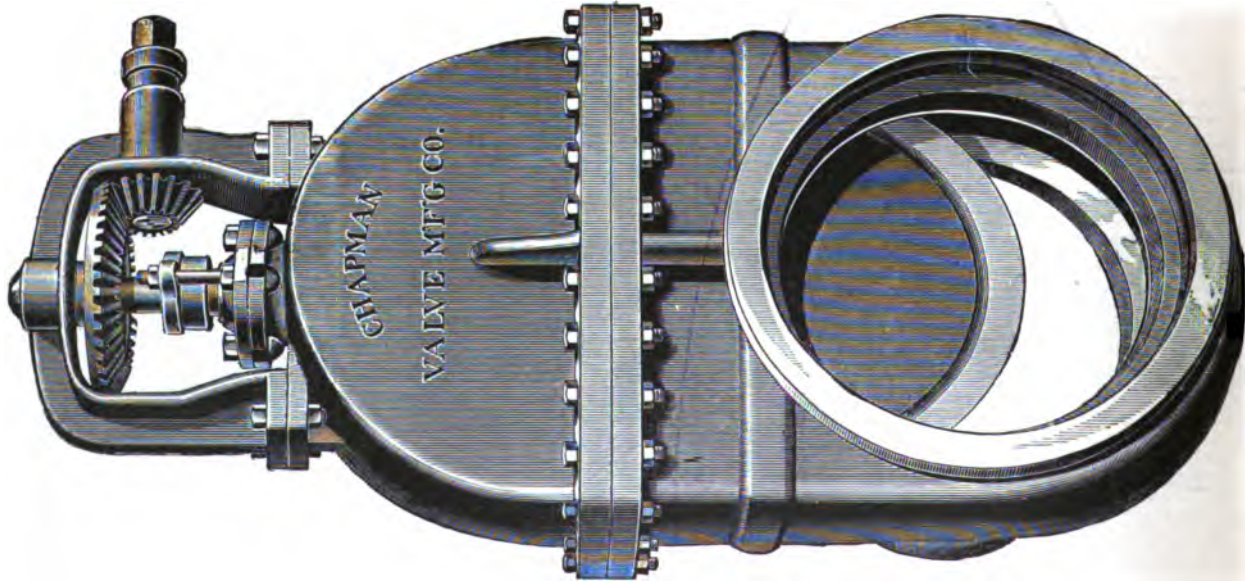


FIG. 133

VALVE WITH BEVEL GEARING

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES FOR WATER AND STEAM

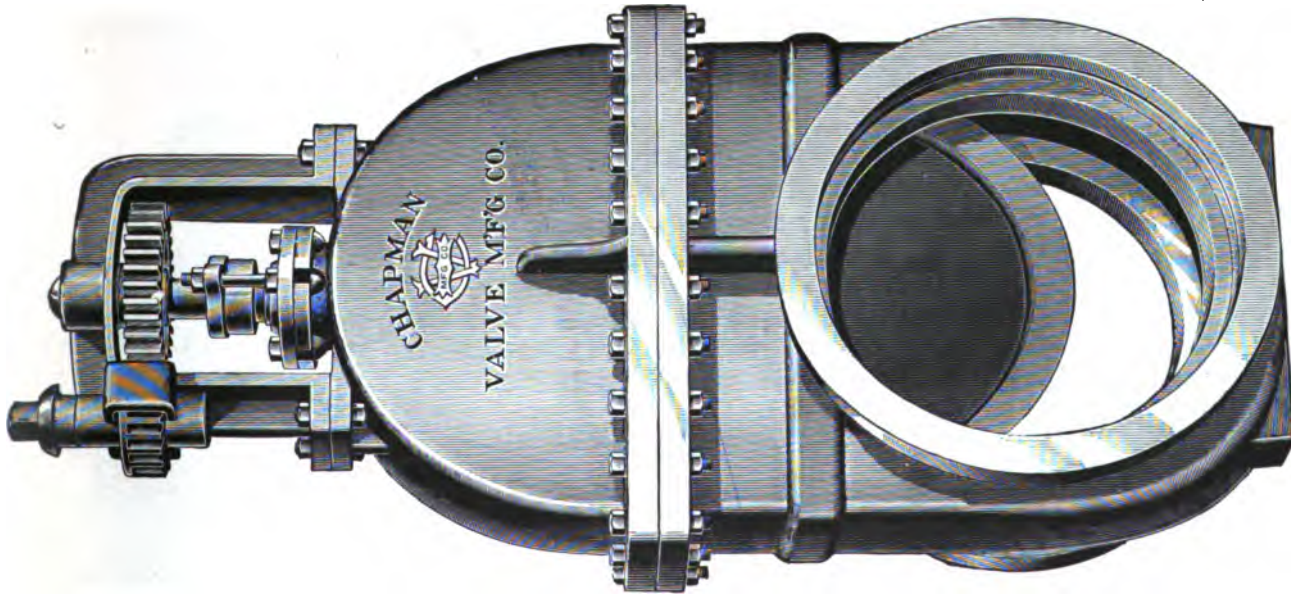


FIG. 134  
VALVE WITH SPUR GEARING

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES FOR WATER AND STEAM

**IRON BODY BOLT TOP GATE VALVES FOR WATER**

INSIDE OR OUTSIDE SCREW

**BELL OR SPIGOT ENDS**

2 IN. TO 12 IN.—200 POUNDS WORKING PRESSURE

26 IN. TO 48 IN.—150 POUNDS WORKING PRESSURE

**BABBITT SEATS AND BRONZE MOUNTINGS**

14 IN. TO 24 IN.—175 POUNDS WORKING PRESSURE



**FIG. 135**  
**BELL END—INSIDE SCREW**

These valves are suitable for the street mains of water works systems and are made especially heavy and strong to resist the stresses due to expansion and contraction, etc. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

They have iron bodies, caps and nuts; iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. The stuffing-boxes have bolt followers and are packed ready for use.

We furnish these valves with wheels instead of nuts on the spindles without extra charge and with indicator, bevel or spur gearing or by-pass valve, at an additional cost.

Unless otherwise ordered they have 2 inch square nut on the spindle and **TURN TO RIGHT TO OPEN.**

Valves, 26 inches and larger, have the sediment plow on the plug, as shown by Fig. 103.

Outside screw valves are extensively used on fire-protection systems.



**FIG. 136**  
**SPIGOT END—INSIDE SCREW**

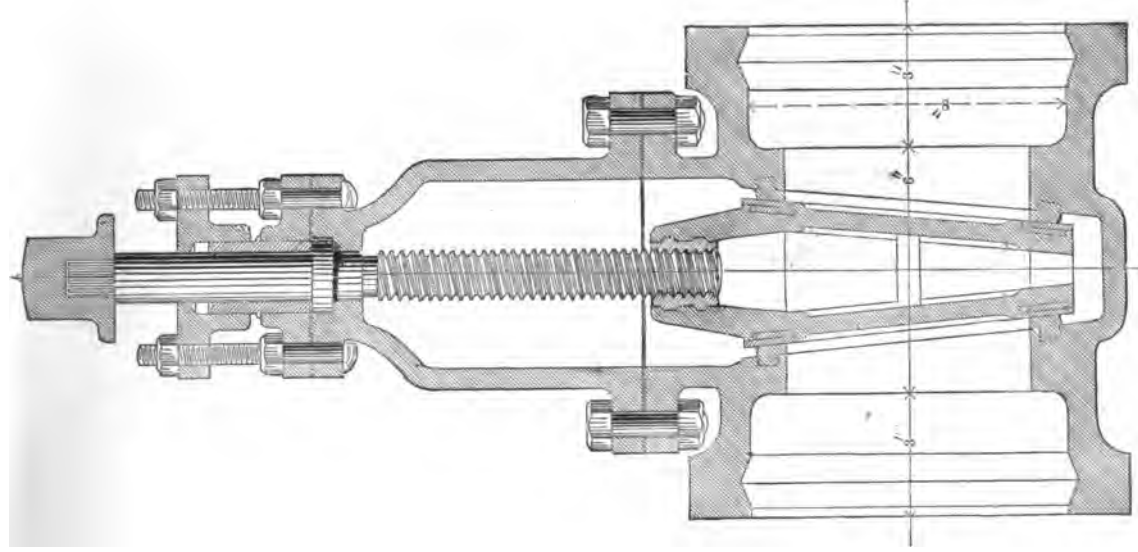


FIG. 137

CROSS-SECTION

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES FOR WATER

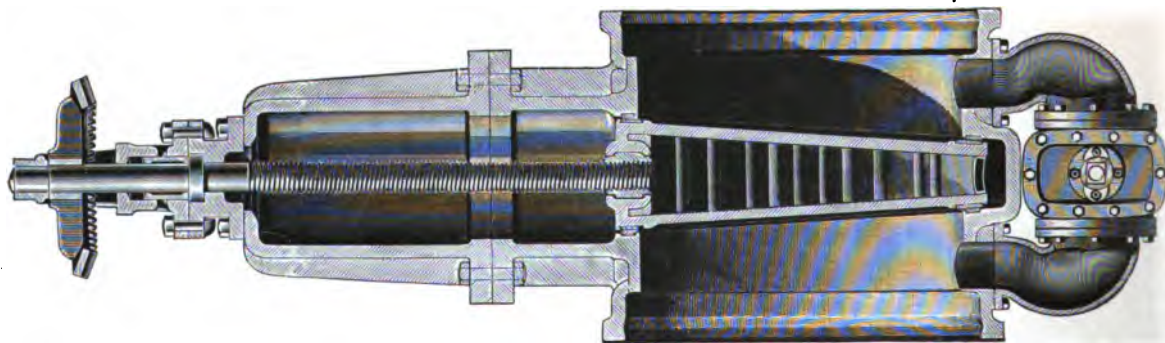


FIG. 138

CROSS-SECTION OF INSIDE SCREW VALVE WITH BY-PASS

IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES FOR WATER

**CHAPMAN VALVE MANUFACTURING CO.**

**FORMER TABLE NO. 14**

**LIST NO. 30**

**PRICE LIST OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER**

**SELL OR SPIGOT ENDS**

DIAMETER OF PORT INCHES	2	3	4	5	6	7	8	9	10	12	14	15
Bell End, Inside Screw	\$9.50	\$12.75	\$19.50	\$22.50	\$29.00	\$34.50	\$43.00	\$53.50	\$65.00	\$87.00	\$114.00	\$137.00
Spigot End, " "	9.50	12.75	19.50	22.50	29.00	34.50	43.00	53.50	66.00	90.00	117.00	141.00
Spur Gearing, " " , Extra												32.00
Bevel Gearing, " " , " "							25.00	27.00	28.00	29.00	29.00	31.00
Geared Ind'r, " " , " "							11.00	11.00	11.00	11.00	11.00	11.00
Bell End, Outside Screw		18.75	28.25	33.00	41.75	47.50	61.00	70.50	86.00	107.00	133.00	167.00
Weight, Bell End, Ins. Scr., lbs.	35	57	119	139	200	236	294	372	458	632	855	1045
Weight, Bell End, Outs. Scr., " "		65	137	161	229	268	361	427	526	681	935	1150
Weight, Gearing, Extra, " "							65	70	70	75	75	92
DIAMETER OF PORT, CONTINUED	16	18	20	22	24	26	28	30	36	40	42	48
Bell End, Inside Screw	\$147.00	\$193.00	\$229.00	\$263.00	\$337.00	\$413.00		\$614.00	\$875.00	\$1386.00	\$1485.00	\$1985.00
Spigot End, " "	152.00	199.00	235.00	269.00	343.00							
Spur Gearing, " " , Extra	33.00	39.00	43.00	44.00	58.00	58.00		58.00	61.00	109.00	109.00	113.00
Bevel Gearing, " " , " "	32.00	35.00	39.00	40.00	50.00	50.00		50.00	59.00	107.00	107.00	111.00
By-Pass, " " , " "	46.00	48.00	51.00	60.00	64.00	64.00		80.00	114.00	114.00	116.00	251.00
Geared Ind'r, " " , " "	11.00	11.00	11.00	11.00	11.00	11.00		11.00	11.00	11.00	11.00	11.00
Bell End, Outside Screw	176.00	228.00	266.00	305.00	385.00	462.00		692.00				
Weight, Bell End, Ins. Scr., lbs.	1159	1600	1855	2120	2900	3650		5400	7300	11875	12300	16000
Weight, Bell End, Outs. Scr., " "	1250	1735	2000	2270	2965	3850		5650				
Weight, Gearing, Extra, " "	92	133	135	135	220	220		230	235	525	525	530
Weight, By-Pass, Extra, " "	290	325	350	465	510	510		675	1050	1050	1080	2450

## IRON BODY BOLT TOP ANGLE GATE VALVES FOR WATER AND STEAM

LIST No. 31

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

BABBITT SEATS AND BRONZE MOUNTINGS

200 POUNDS WORKING WATER PRESSURE

80 POUNDS WORKING STEAM PRESSURE

---

These valves are much more compact than an elbow and straight valve, and save one joint in the pipe line. The angle ends are of good radius. These valves are suitable for water, steam and oil systems where additional strength is required to resist the stresses of expansion and contraction, etc. They are extensively used on the receiver piping of compound and triple expansion engines.

They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

The temperature should not exceed 325 degrees Fahrenheit, corresponding to saturated steam of 80 pounds gage pressure.

They have iron bodies, caps and wheels; bronze plugs or iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. Inside screw valves 14 inches and smaller have screw packing-nut stuffing-boxes. All other valves have bolt follower boxes. All stuffing-boxes are packed ready for use.

We furnish the inside screw valves with indicator and either inside or outside screw valves with gearing or with by-pass valve at an additional cost.

FOR COMPANION FLANGES SEE LIST 68





FIG. 139

SCREW END—INSIDE SCREW

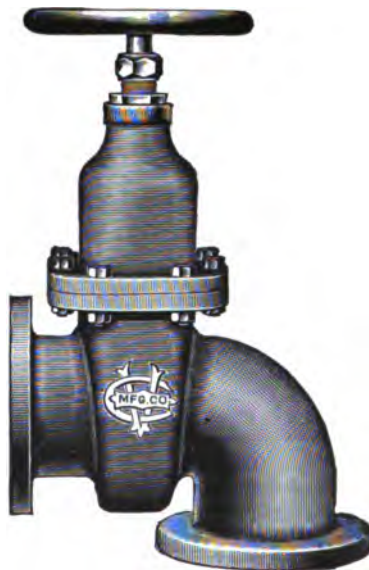


FIG. 140

FLANGE END—INSIDE SCREW



FIG. 141

FLANGE END—OUTSIDE SCREW

**IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES FOR WATER AND STEAM**



CHAPMAN VALVE MANUFACTURING CO.

LIST No. 31

PRICE LIST OF IRON BODY BRONZE MOUNTED ANGLE GATE VALVES FOR WATER AND STEAM

SCREW OR FLANGE ENDS

BARBITT SEATS

		SCREW TOP					BOLT TOP			
DIAMETER OF PORT	INCHES	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Screw End, Inside Screw							\$10.50	\$13.50	\$17.50	\$20.50
Flange End, " "						8.00	11.50	14.75	19.00	19.50
Sliding Stem and Lever, " " Extra						1.25	2.10	2.50	3.25	3.25
Navy Indicator, " " "						1.50	2.50	2.60	2.60	2.75
Screw End, with Indicator*							13.00	16.25	20.25	23.50
Flange End, with Indicator*						9.50	14.00	17.50	21.75	22.50
Screw End, Outside Screw							16.25	19.50	25.50	29.25
Flange End, " "							17.25	20.75	27.00	28.25
Drilling Flanges, Extra						.12	.16	.16	.16	.16
Weight, Screw End, Inside Screw, lbs.						20	34	46	66	70
Weight, Flange End, " " , "						24	46	56	80	91
Weight, Screw End, with Indicator, "							37	50	70	83
Weight, Flange End, with Indicator, "							49	60	84	95
Weight, Screw End, Outside Screw, "							41	54	80	97
Weight, Flange End, " " , "							53	64	94	109
*Navy Indicator for Valves 2 in. and smaller—Side Indicator for larger Valves										

**CHAPMAN VALVE MANUFACTURING CO.**

**PRICE LIST OF IRON BODY BRONZE MOUNTED ANGLE GATE VALVES FOR WATER AND STEAM**  
**SCREW OR FLANGE ENDS**

**LIST NO. 31**  
**CONTINUED**

			BOLT TOP								
DIAMETER OF PORT <sup>a</sup>		INCHES	4½	5	6	7	8	9	10	12	14
Screw End,	Inside Screw		\$27.50	\$28.50	\$36.50	\$47.00	\$58.00	\$71.50	\$89.00	\$121.00	
Flange End,	“ “		26.00	27.00	32.75	41.50	48.00	59.50	75.00	103.00	\$138.00
Sliding Stem and Lever,	Extra		3.75	3.75	5.00	5.00	8.75	8.75	10.25	11.60	
Geared Indicator,	“						11.00	11.00	11.00	11.00	11.00
Navy Indicator,	“		3.00	3.00	4.00	4.60	5.00	6.00	6.00	7.00	8.00
Screw End, with Side Indicator			31.25	33.00	41.50	52.00	64.00	77.50	96.00	128.00	
Flange End, with Side Indicator			30.00	31.00	37.50	46.50	54.00	65.50	81.00	110.00	147.00
Screw End,	Outside Screw		38.00	39.00	49.50	60.00	75.00	88.50	110.00	141.00	
Flange End,	“ “		36.25	37.25	45.50	55.00	65.00	76.50	96.00	123.00	156.00
Quick Thread,	Extra		.75	.80	1.00	1.10	1.25	1.40	1.60	1.85	2.25
Drilling Flanges,	“		.16	.20	.25	.35	.40	1.10	1.40	2.00	2.50
Weight, Screw End,	Inside Screw, lbs.		113	133	192	237	315	413	507	793	
Weight, Flange End,	“ “ , “		123	148	206	272	325	419	496	774	1044
Weight, Screw End, with Indicator,	“		119	140	200	245	324	423	542	806	
Weight, Flange End, with Indicator,	“		129	155	214	279	334	429	506	787	1061
Weight, Screw End,	Outside Screw, “		136	155	221	269	382	468	600	842	
Weight, Flange End,	“ “ , “		146	170	235	303	392	474	564	823	1124
Weight, Gearing,	Extra, “						65	70	70	75	75

<sup>a</sup>Larger sizes furnished if desired

## EXTRA HEAVY IRON BODY SCREW AND BOLT TOP GATE VALVES FOR WATER

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

BABBITT SEATS AND BRONZE MOUNTINGS

 $\frac{1}{4}$  IN. TO 4 IN.—600 POUNDS WORKING PRESSURE

10 IN. TO 16 IN.—350 POUNDS WORKING PRESSURE

5 IN. TO 9 IN.—450 " " "

18 IN. TO 24 IN.—300 " " "

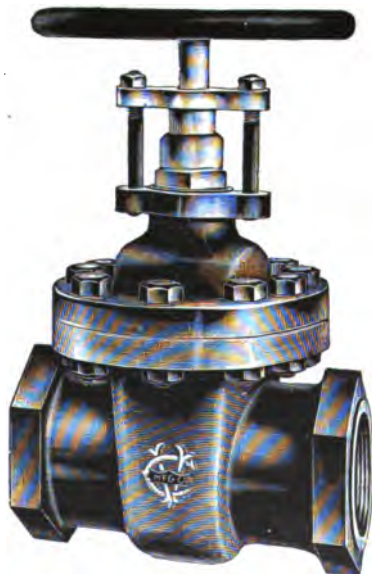


FIG. 142

SCREW END—INSIDE SCREW

These valves are made from extra heavy patterns and are suitable for high pressure water and oil lines. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. The temperature should not exceed 325 degrees Fahrenheit. The valves have iron bodies, caps and wheels; bronze plugs or iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. Inside screw valves, 2 inches and smaller in size, have driving gland stuffing-boxes: all other valves have bolt follower boxes. All stuffing-boxes are packed ready for use.

The outside screw valves have the Chapman Self-Packing feature, enabling them to be packed while open and under pressure. We furnish the inside screw valves with indicator and either inside or outside screw valves with gearing or by-pass valve at an additional cost. We advise by-pass on all valves 12 inches and larger in size. The valves can be furnished with screw ends or plain or tongued flange ends, as listed. Valves 12 inches and larger are furnished with ribs and by-pass, unless otherwise ordered.

FOR COMPANION FLANGES SEE LIST 69

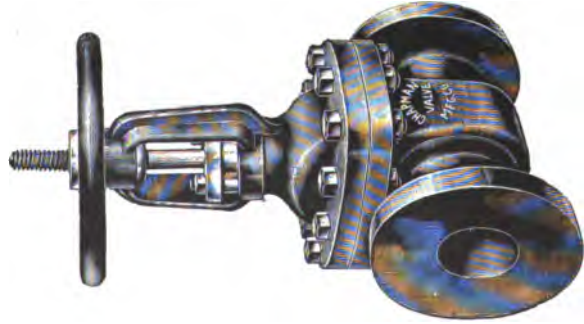


FIG. 143  
FLANGE END  
OUTSIDE SCREW

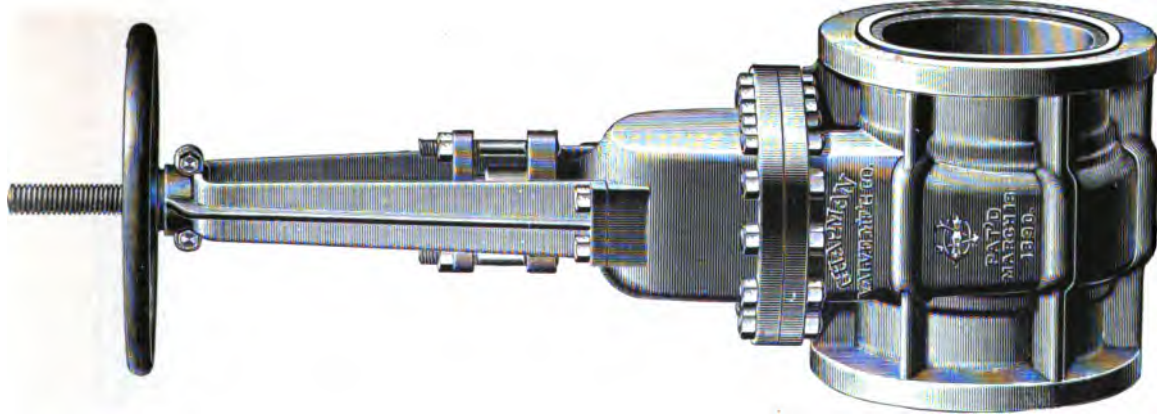


FIG. 144  
OUTSIDE SCREW VALVE  
WITH  
RIBS AND TONGUED FLANGES

EXTRA HEAVY IRON BODY BRONZE MOUNTED BABBITT SEAT VALVES

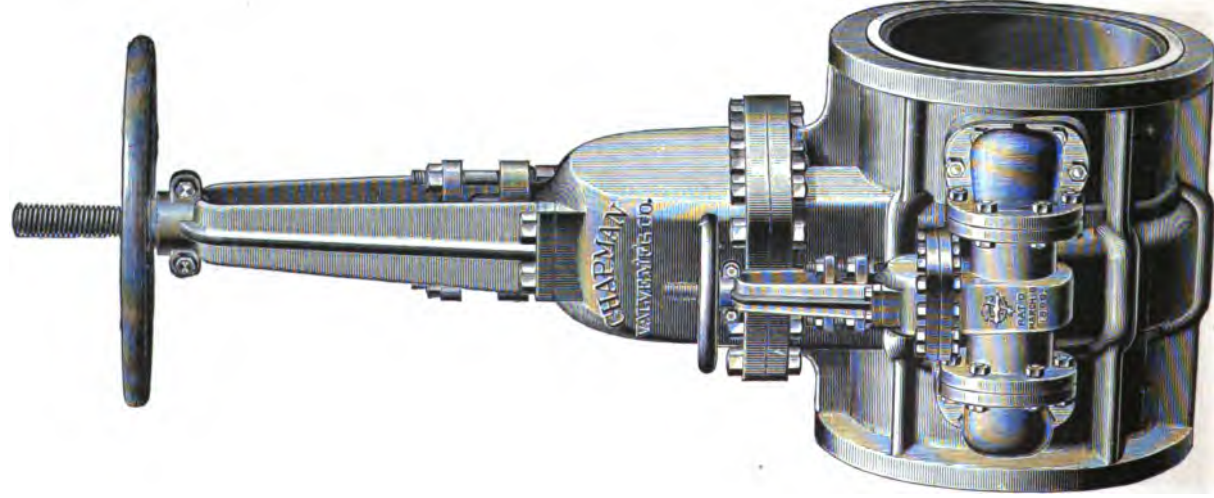


FIG. 145

OUTSIDE SCREW RIBBED VALVE  
WITH BY-PASS AND TONGUED FLANGES

EXTRA HEAVY IRON BODY BRONZE MOUNTED RABBIT SEAT VALVES

CHAPMAN VALVE MANUFACTURING CO.

**PRICE LIST OF EXTRA HEAVY IRON BODY BRONZE MOUNTED GATE VALVES FOR WATER**  
**SCREW OR FLANGE ENDS**

**LIST NO. 32**

**BRASS METAL SEATS**

		SCREW TOP							BOLT TOP					
DIAMETER OF PORT	INCHES	$\frac{1}{4}$ & $\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5
Screw End,	Inside Screw,		4.50	\$5.10	\$6.30	\$7.40	\$8.50	\$10.60	\$16.80	\$21.00	\$23.25	\$28.25	\$36.75	\$43.00
Flange End,	“ “		4.75	5.65	7.10	8.25	9.60	12.00	17.50	21.75	24.00	29.50	37.00	44.00
By-Pass,	“ “ , Extra													16.25
Screw End,	Outside Screw			6.80	8.00	9.00	10.50	13.00	20.50	25.25	29.75	36.00	48.50	53.00
Flange End,	“ “			7.40	8.75	9.75	11.50	14.25	21.00	26.00	30.75	37.00	49.00	54.00
By-Pass,	“ “ , Extra													17.75
Ribs for Valve without By-Pass,	“													3.50
Ribs for Valve with By-Pass,	“													4.00
Drilling Flanges,	“				.20	.20	.20	.20	.35	.35	.40	.55	.80	1.00
Tongueing Flanges,	“				.45	.50	.55	.60	1.25	1.40	1.50	1.50	1.50	1.75
Weight, Screw End,	Inside Screw, lbs.	3	6	9	12	16	22	30	54	81	98	115	165	227
Weight, Flange End,	“ “ “	4 $\frac{1}{2}$	8	12	15	20	28	38	68	98	118	137	183	255
Weight, Screw End,	Outside Screw, “			10	13	17	23	31	58	85	110	127	184	249
Weight, Flange End,	“ “ “			13	16	21	29	39	72	102	130	149	202	277
Weight, By-Pass,	Extra, “													54
Weight, Ribs,	“ , “													52

CHAPMAN VALVE MANUFACTURING CO.

LIST No. 32  
CONTINUED

PRICE LIST OF EXTRA HEAVY IRON BODY BRONZE MOUNTED GATE VALVES FOR WATER  
SCREW OR FLANGE ENDS BABBITT METAL SEATS

DIAMETER OF PORT INCHES	6	7	8	9	10	12	14	15	16	18	20	22	24
Screw End, Inside Screw	\$49.00	\$60.00	\$71.00										
Flange End, " "	50.50	60.50	72.00	\$85.50	\$103.00	\$141.00	\$174.00	\$206.00	\$222.00	\$290.00	\$369.00	\$439.00	\$507.00
By-Pass, " " , Extra	16 25	17.25	19.75	20.75	21.50	27.00	28.75	31.00	59.00	62.50	80.00	82.00	85.00
Screw End, Outside Screw	64.50	76.50	89.00										
Flange End, " "	65.50	77.00	90.00	102.00	121.00	159.00	193.00	236.00	254.00	336.00	411.00	486.00	566.00
By-Pass, " " , Extra	17.75	18.75	21.50	22.50	23.50	29.25	31.00	33.00	63.50	66.50	88.00	90.00	93.00
Ribs for V. without By-Pass, "	3.50	3.50	4.00	4.00	5.00	7.00	7.50	9.00	9.00	10.00	12.00	14.50	16.00
Ribs for Valve with By-Pass, "	4.00	4.00	4.50	5.00	6.00	8.00	9.00	10.00	14.00	15.00	17.00	20.00	21.00
Drilling Flanges, "	1.50	1.75	1.75	2.10	2.50	3.50	5.00	5.25	5.75	8.00	9.75	11.75	13.00
Tongueing Flanges, "	1.75	1.75	2.25	2.60	3.00	3.50	6.75	9.75	12.00	14.00	15.75	18.25	20.00
Weight, Scr. End, Ins. Scr., lbs.	273	368	419										
Weight, Flg. End, " " "	309	402	475	553	707	1056	1365	1636	1792	2490	2888	3650	4272
Weight, Scr. End, Outs. Scr., "	323	403	486										
Weight, Flg. End, " " "	359	437	542	616	764	1115	1433	1730	1900	2700	3034	3820	4564
Weight, Rib, Extra, "	52	56	58	66	80	83	97	105	159	165	175	216	246
Weight, By-Pass, " , "	54	66	86	96	101	131	151	171	444	479	622	637	662

Valves 12 inches and larger in size are furnished with Rib and By-Pass unless otherwise ordered

# EXTRA HEAVY IRON BODY SCREW AND BOLT TOP ANGLE GATE VALVES FOR WATER

LIST NO. 33

## INSIDE OR OUTSIDE SCREW

### SCREW OR FLANGE ENDS

$\frac{1}{2}$  IN. TO 4 IN.—600 POUNDS WORKING PRESSURE  
6 IN. TO 8 IN.—480     "     "     "

### BABBITT SEATS AND BRONZE MOUNTINGS

10 IN. TO 16 IN.—350 POUNDS WORKING PRESSURE  
18 IN. TO 24 IN.—300     "     "     "

---

These valves are much more compact than an elbow and straight valve and save one joint in the pipe line. The angle ends are of good radius.

These valves are made from extra heavy patterns and are suitable for high pressure water and oil lines. They are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. The temperature should not exceed 325 degrees Fahrenheit.

The valves have iron bodies, caps and wheels; bronze plugs or iron plugs with bronze faces; solid bronze spindles and special babbitt metal seats. Inside screw valves 2 inches and smaller in size have driving gland stuffing-boxes; all other valves have bolt follower boxes. All stuffing-boxes are packed ready for use.

The outside screw valves have the Chapman Self-Packing feature, enabling them to be packed while open and under pressure.

We furnish the inside screw valves with indicator and either inside or outside screw valves with gearing or with by-pass valve at an additional cost. We advise by-pass on all valves 12 inches and larger in size.

The valves can be furnished with screw ends or with plain or tongued flange ends, as listed. Valves 12 inches and larger are furnished with ribs and by-pass unless otherwise ordered.

FOR COMPANION FLANGES SEE LIST 69





FIG. 146

FLANGE END—INSIDE SCREW



FIG. 147

FLANGE END—OUTSIDE SCREW

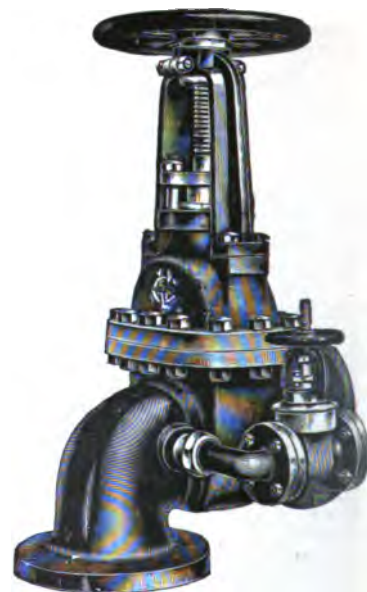


FIG. 148

OUTSIDE SCREW WITH BY-PASS

**EXTRA HEAVY IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES**

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 33

PRICE LIST OF EXTRA HEAVY IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES FOR WATER

SCREW OR FLANGE ENDS

		SCREW TOP							BOLT TOP		
DIAMETER OF PORT	INCHES	$\frac{1}{4}$ & $\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$
Screw End, Inside Screw				\$5.70	\$7.00	\$8.25	\$9.60	\$11.85	\$19.25	\$23.50	\$26.75
Flange End, " "				6.10	7.50	8.75	10.25	13.00	18.80	23.25	26.25
Screw End, Outside Screw				7.40	8.75	9.75	11.50	14.25	23.00	28.00	33.25
Flange End, " "				7.80	9.25	10.25	12.00	15.25	22.50	27.50	33.00
Drilling Flanges, Extra					.20	.20	.20	.20	.35	.35	.40
Tongueing Flanges, "					.45	.50	.55	.60	1.25	1.40	1.50
Weight, Screw End, Inside Screw, lbs.				10	14	18	25	33	58	85	111
Weight, Flange End, " " , "				13	17	22	31	41	72	102	131
Weight, Screw End, Outside Screw, lbs.				11	15	19	26	34	62	89	123
Weight, Flange End, " " , "				14	18	23	32	42	76	106	143

**CHAPMAN VALVE MANUFACTURING CO.**

**LIST NO. 33**  
**CONTINUED**

**PRICE LIST OF EXTRA HEAVY IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES FOR WATER**

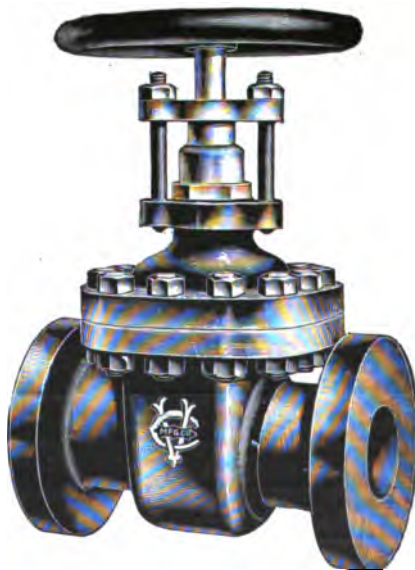
**SCREW OR FLANGE ENDS**

DIAMETER OF PORT		INCHES	4	4½	5	6	7	8	9	10	12	14
Screw End,	Inside Screw		\$32.75	\$42.75	\$50.00	\$58.50	\$74.00	\$87.50				
Flange End,	" "		32.25	40.50	47.50	55.00	66.00	79.00	\$96.00	\$116.00		
By-Pass,	" " , Extra				16.25	16.25	17.25	19.75	20.75	21.50	\$27.00	\$28.75
Screw End,	Outside Screw		40.50	54.50	60.00	74.00	91.00	106.00				
Flange End,	" "		40.00	52.00	57.50	70.50	83.00	97.00	113.00	134.00		
By-Pass,	" " , Extra				17.75	17.75	18.75	21.50	22.50	23.50	29.25	31.00
Ribs for Valve without By-Pass,	"				3.50	3.50	3.50	4.00	4.00	5.00	7.00	7.50
Ribs for Valve with By-Pass,	"				4.00	4.00	4.00	4.50	5.00	6.00	8.00	9.00
Drilling Flanges,	"		.55	.80	1.00	1.50	1.75	1.75	2.10	2.50	3.50	5.00
Tongueing Flanges,	"		1.50	1.50	1.75	1.75	1.75	2.25	2.60	3.00	3.50	6.75
Weight, Screw End,	Inside Screw, lbs.		133	186	250	290	423	457				
Weight, Flange End,	" " , "		155	204	278	326	457	513	678	855		
Weight, Screw End,	Outside Screw, "		145	205	272	340	458	524				
Weight, Flange End,	" " , "		167	223	300	376	492	580	741	912		
Weight, Ribs,	Extra, "				52	52	56	58	66	80	83	97
Weight, By-Pass,	" "				54	54	66	86	96	101		

**SPECIAL HEAVY PRESSURE IRON BODY GATE VALVES FOR WATER AND OIL****INSIDE SCREW****SCREW OR FLANGE ENDS****BABBITT SEATS AND BRONZE MOUNTINGS****2000 POUNDS TEST PRESSURE****1000 POUNDS WORKING PRESSURE****Fig. 149****SCREW END—INSIDE SCREW**

These valves are made from special extra heavy patterns and are especially designed for use on hydraulic work, oil pumping lines, etc. They will stand a test pressure of 2000 pounds per square inch and are suitable for a working pressure of 1000 pounds. They have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. The temperature should not exceed 325 degrees Fah. They are made with iron bodies, caps and wheels, solid bronze plugs and spindles and special babbitt metal seats.

The stuffing-boxes are fitted with bolt followers and packed ready for use. The valves are furnished with screw ends or with plain or tongued flanged ends, as listed.

**Fig. 150****FLANGE END—INSIDE SCREW**

**CHAPMAN VALVE MANUFACTURING CO.**

**FORMER TABLE NO. 11**

**LIST No. 34**

**PRICE LIST OF SPECIAL HEAVY PRESSURE IRON BODY BRONZE MOUNTED GATE VALVES FOR WATER**

**SCREW OR FLANGE ENDS**

**RABBITT SEATS**

DIAMETER OF PORT		INCHES	2	2½	3	3½	4	4½	5	6
Screw End,	Inside Screw		\$24.00	\$28.25	\$36.25	\$52.00	\$71.00	\$93.00	\$113.00	\$139.00
Flange End,	" "		25.25	29.75	37.50	55.00	76.00	101.00	122.00	149.00
By-Pass,	" " , Extra									
Screw End,	Outside Screw									
Flange End,	" "									
By-Pass,	" " , Extra									
Drilling Flanges,	"									
Weight, Screw End,	Inside Screw, lbs.		59	74	124	224	322	418	514	690
Weight, Flange End,	" " , "		72	92	137	259	374	499	604	793
Weight, Screw End,	Outside Screw, "									
Weight, Flange End,	" " , "									
Weight, By-Pass,	Extra, "									

**SPECIAL C P IRON BODY GATE VALVES FOR LOW PRESSURE WATER, STEAM AND AIR****INSIDE OR OUTSIDE SCREW****SCREW, FLANGE OR BELL ENDS****BABBITT SEATS AND BRONZE MOUNTINGS**

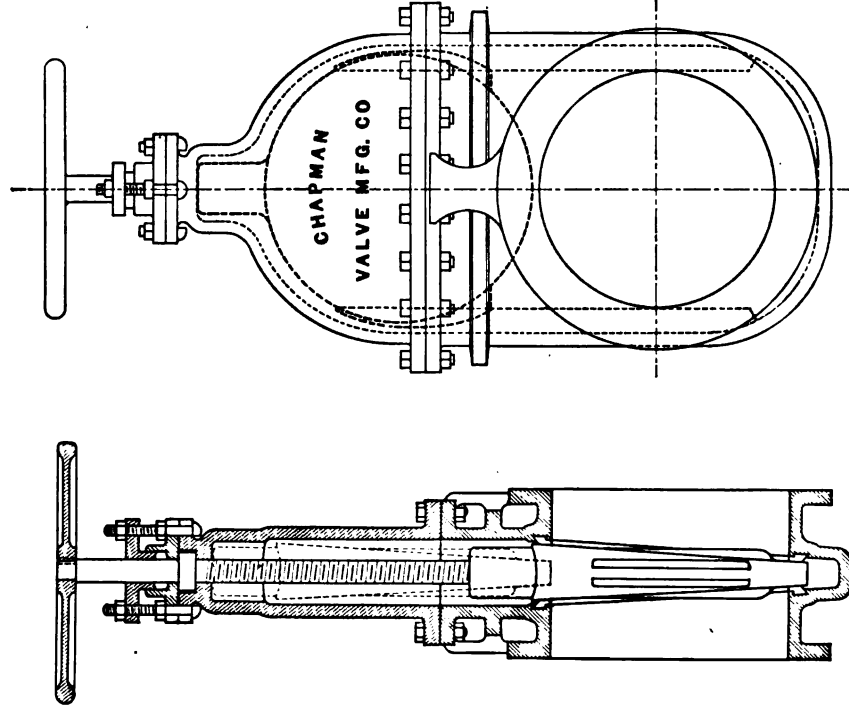
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These valves, which are illustrated in the three following pages, are made in any size desired and are suitable for low pressure water, steam and air lines, such as water-works, sewage and irrigation systems, pumping engine suction lines, exhaust and condenser piping in steam power plants, air pipes of blast furnaces, etc. They are especially suitable for the large exhaust and water valves of condensing steam power plants, as they occupy the minimum amount of room and are perfectly tight against any leakage of air tending to impair the vacuum. When used for this purpose we frequently rib the body of the valve (as shown in Fig. 156) for expansion and piping stresses.

These valves are especially designed to occupy as little space as possible. Owing to the construction of the gate or plug and the valve cap, we are enabled to make the length, face to face, much less than our regular valves, while preserving in every particular the strength and working qualities.

They are made with iron bodies and caps, put together with bolted joint, iron wheels, bronze spindles, bronze or iron-faced plugs and special babbitt metal seats. The stuffing-boxes have bolted followers and are packed ready for use. They are suitable for use where the temperature does not exceed 325 degrees Fahrenheit, and have inside or outside screw according to the service. When desired we furnish them with chain-wheel, gearing or indicator, with hydraulic or pneumatic lifting cylinder, or arrange them to be operated by electric motor, as described in Section VI. Dimensions will be found in Section X.

We shall be pleased to furnish prices upon receipt of data covering fully the conditions under which the valves are to work.



CROSS SECTION

FIG. 151

END ELEVATION

FIG. 152

**SPECIAL C P VALVE WITH INSIDE SCREW**

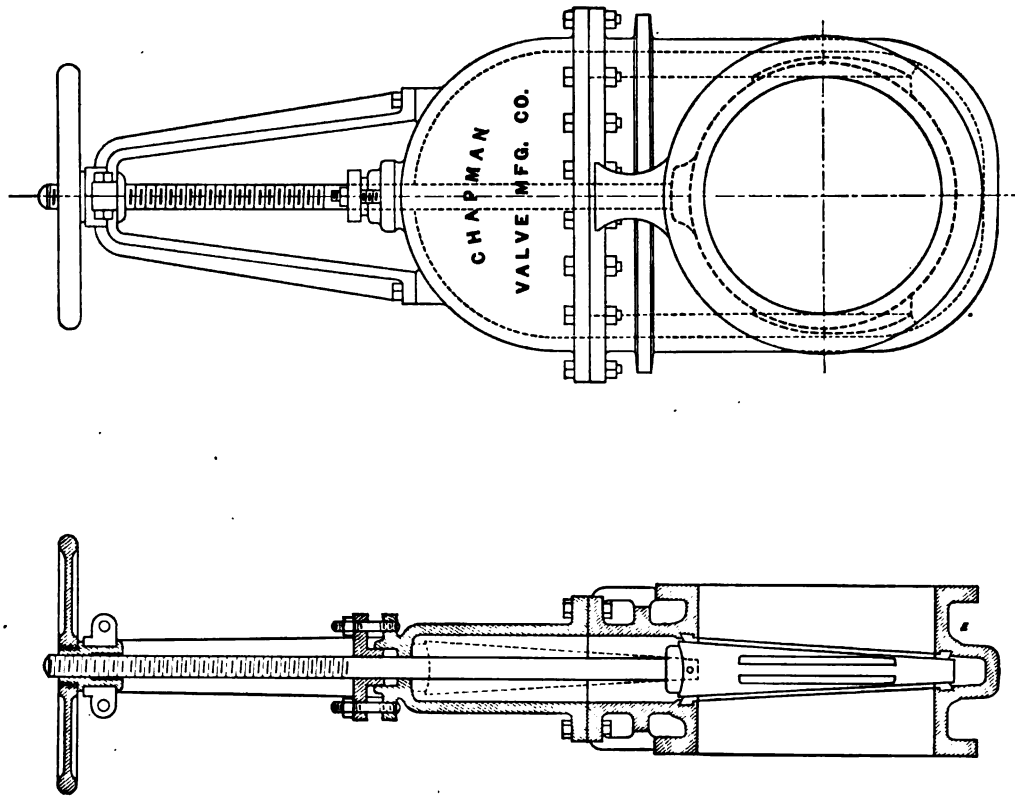


FIG. 153  
CROSS-SECTION

FIG. 154  
END ELEVATION

**SPECIAL CP VALVE WITH OUTSIDE SCREW**



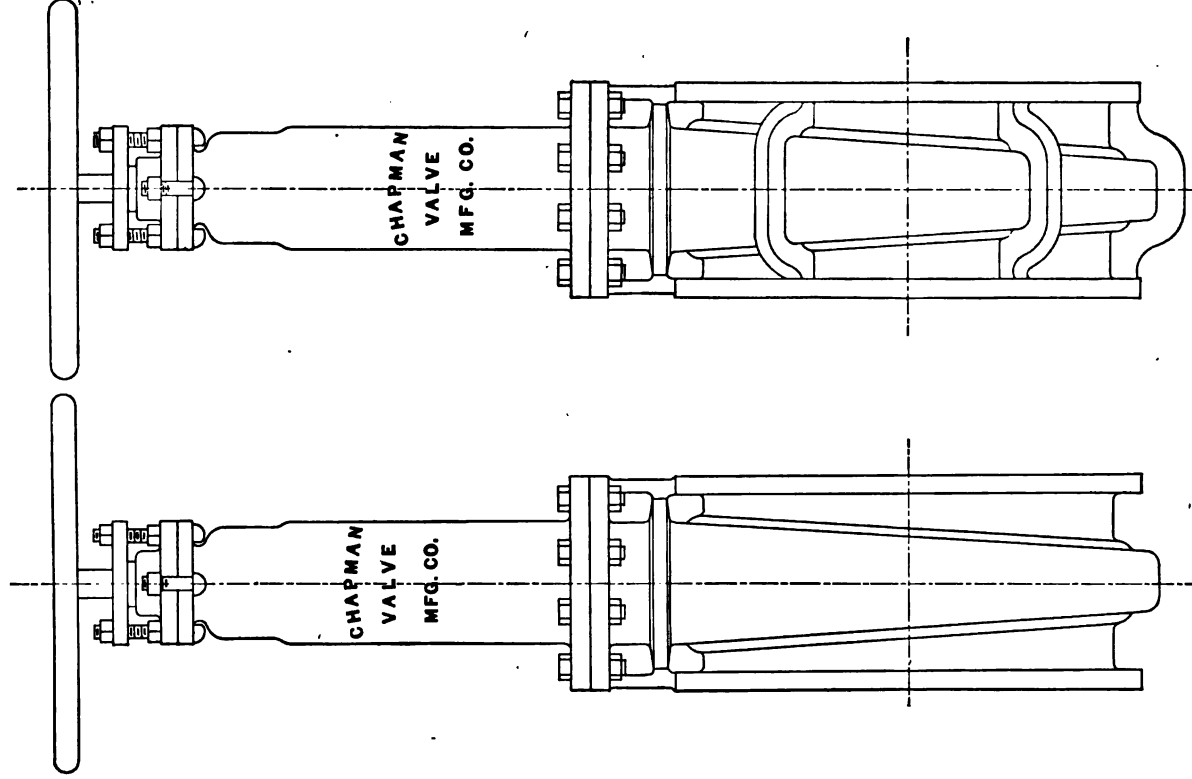


FIG. 155

WITH PLAIN BODY

FIG. 156

WITH BODY RIBBED  
FOR EXPANSION STRESSES

SPECIAL C P VALVE

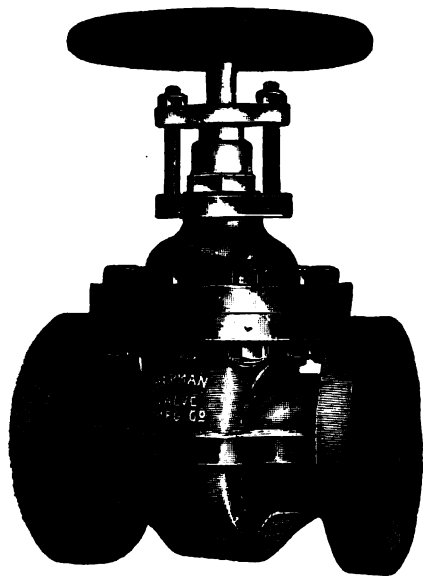


FIG. 157

### SPECIAL IRON BODY VALVES

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In addition to the regular iron body valves in the preceding lists we make many special valves for various purposes and for either lower, intermediate or higher pressures than those given.

The accompanying cut shows a valve especially designed for 1,250 pounds working water pressure.

We have an extensive line of patterns for special valves and are prepared to meet promptly the requirements in almost every case. We solicit correspondence regarding such work.





SECTION III.

CHAPMAN IRON BODY GATE VALVES

WITH

RENEWABLE BRONZE SEATS AND BRONZE  
MOUNTINGS

FOR

HIGH TEMPERATURE STEAM AND WATER.



**CHAPMAN IRON BODY GATE VALVES FOR HIGH PRESSURE OR HIGH TEMPERATURE STEAM**



**CHAPMAN  
VALVE MFG. CO.**



**ALL VALVES MADE BY US HAVE ONE OR MORE OF THE ABOVE DISTINGUISHING MARKS.**

We were the first manufacturer to produce a satisfactory valve for use with steam of high pressure and temperature. We have made a specialty of this class of work since 1889 and our present lines of **IRON BODY BRONZE MOUNTED STEAM VALVES WITH REMOVABLE BRONZE SEATS** are the result of extensive experience in this line.

These valves are made of the best materials and in the most thorough manner and are recognized as **STANDARD FOR EXCELLENCE OF DESIGN, MATERIAL AND WORKMANSHIP.** They are extensively used in the largest steam power plants in the United States, England and Europe.

**PRESSURES  
AND  
STYLES**

These valves are made in two weights—the heavy for 125 pounds working steam pressure and the extra heavy for 250 pounds working steam pressure. They are made in all sizes from 1 inch to 30 inch inclusive; in both straight and angle pattern; with inside or outside screw; with screw ends or with plain or tongued flange ends; and with or without ribs or by-pass valve, as required.

## DETAILS

Sectional drawings, showing the details of construction, are shown on the pages immediately following and a detailed description accompanies each price-list. The valves are of the **DOUBLE FACED SOLID WEDGE PLUG TYPE**, have a straightway passage the full diameter of the connecting pipes and are equally tight against pressure from either side.

## PLUG

The gate or plug is in **ONE PIECE**, made wedge-shaped or tapering, heavily braced or ribbed, and closes vertically between two inclined seats or surfaces in the body. To ensure perfect alignment with the spindle the plug is guided by ribs or splines in the body which engage with grooves in the edges of the plug and prevent it from turning, coming into contact with its seats or chattering while opening or closing. The plug is of solid bronze in the smaller sizes and of cast iron with bronze faces in the larger sizes.

## SCREW AND BOLT TOP

Valves 2 inches and less in size have screw tops as shown in Figs. 175 and 176; the larger valves have bolt tops as in Figs. 177 and 178.

## INSIDE SCREW VALVES

Valves with inside screw are shown in Figs. 175 and 177. In these valves the spindle revolves but does not rise, being held vertically by the thrust collar C. The plug rises and falls on the spindle, its upper portion being threaded to form a nut for the screw on the lower end of the spindle. Cast iron plugs are bushed with bronze where the spindle turns as shown in Fig. 177. The thrust collar is held between two immovable metal faces, thus avoiding any tendency to cramp the spindle in the stuffing-box. The operating screw of these valves is entirely inside the valve body and cap.

## OUTSIDE SCREW VALVES

We especially recommend the outside screw valves shown in Figs. 176 and 178 for this service. In these valves the **UPPER** portion of the spindle is threaded and the spindle is operated by a revolving nut N, held vertically in the yoke Y by the collars shown, and turned by the handwheel which is fastened to it. The spindle rises and falls **WITHOUT REVOLVING** and the plug being fastened to the lower end of the spindle rises and falls with it. The operating screw of these valves is entirely **OUTSIDE** the valve body, where it can be inspected

and oiled, thus ensuring easy operation of the plug. The spindle rises through the stuffing-box and wheel WITHOUT TURNING, which allows the packing to be kept tight without difficulty.

The handwheel is stationary vertically and the projection of the spindle through the wheel forms the best possible indicator, requiring no intermediate mechanism.

#### SEATING

A sufficient amount of looseness or "play" is left in the connection of the spindle and plug to allow the plug to seat truly without cramping the spindle.

#### REMOVABLE SEATS

The removable seats are made of HARD GUN METAL BRONZE and are screwed into the body AT RIGHT ANGLES TO THE TAPER FACES OF THE PLUG, as shown in the drawings: they seat against a finished surface in the body making a steam-tight joint irrespective of the thread. They are INTERCHANGEABLE and RENEWABLE. These seats will not become loose after repeated expansion and contraction and are the most satisfactory renewable seats on the market.

#### SELF-PACKING FEATURES

The OUTSIDE SCREW valves have the Chapman Self-Packing Device, consisting of a spherical collar K on the spindle, which closes against a finished seat S in the cap WHEN THE VALVE IS WIDE OPEN and allows the stuffing-box to be repacked under pressure without closing the valve.

This collar is made a part of the spindle, leaving only one seat to be kept tight; the play in the connection of the plug and spindle allows the packing collar to seat truly against the cap.

The construction of the Chapman INSIDE SCREW valves is such that, for all practical purposes, they are also self-packing; when the plug is drawn up TIGHTLY against the cap, as in Fig. 175, the finished thrust collar C seats itself against the finished bottom surface of the recess in the cap and effectually prevents the escape of steam into the stuffing-box.

## BY-PASSES

For use in filling long lines of pipes, in equalizing the pressure on both sides of a valve before opening or in warming up old pipes, cylinders, etc., we fit all sizes of these valves from 5 inches upward with a by-pass pipe and valve of proper size which engages with the body or port on each side of the plug as shown in Fig. 180. We recommend by-pass on all valves 12 inches and larger in size. In many cases, particularly on valves used as engine throttles and cut-out valves in steam mains, we advise the use of a by-pass on valves of smaller size than 12 inches.

## RIBS

For use in long lines subjected to excessive stresses from the expansion and contraction due to the high temperature, we recommend the use of valves provided with the longitudinal stiffening ribs shown in Fig. 197. These ribs effectually prevent any distortion or springing of the valve body or flanges under the stress.

## ANGLE VALVES

Fig. 181 shows an outside screw angle gate valve of the same construction as the straight valves. These angle valves occupy much less space than an elbow and straight valve and save one joint in the pipe line; they are tight against pressure from either side. They are made with inside or outside screw, screw or flange ends and with or without ribs or by-pass valve.

## ENDS

These valves are made with screw ends or with plain or tongued flange ends. The screw ends are recessed behind the thread to prevent the pipe from bottoming as shown in Fig. 175, and have U. S. or Briggs Standard Pipe threads unless otherwise ordered; English threads furnished when required. The flange ends are of the well-known Chapman Heavy and Extra Heavy dimensions, which have been adopted by the leading manufacturers of flanged fittings.

Unless otherwise ordered these valves are fitted with handwheel for operating and are arranged to TURN TO LEFT TO OPEN. They can be fitted with gearing or arranged to be operated by floor stand if desired; for particulars see Section VI. of this catalogue.

## TESTING

All parts of the valves are heavy and well-proportioned; every valve is subjected to a rigid test WHILE BOTH OPEN AND CLOSED and its tightness under all working conditions is ensured before it leaves the works.



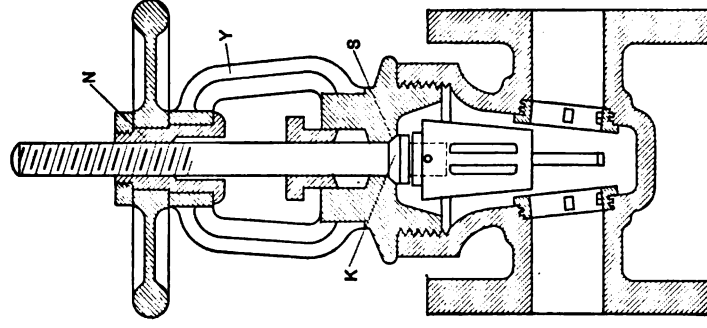


FIG. 176  
SCREW TOP  
OUTSIDE SCREW

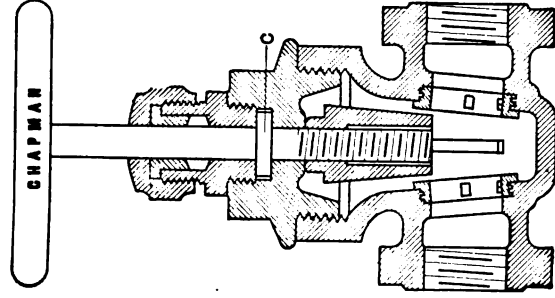
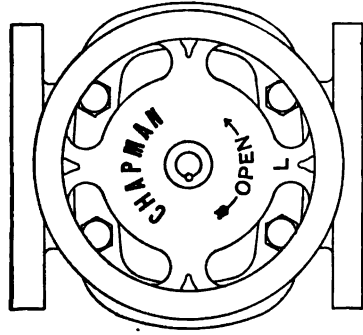
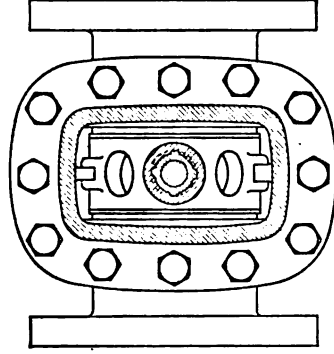


FIG. 175  
SCREW TOP  
INSIDE SCREW

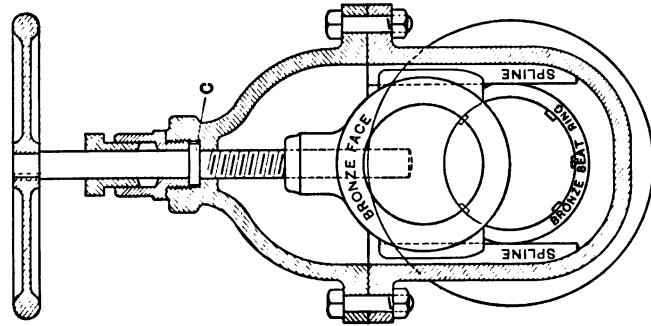
IRON BODY BRONZE SEAT GATE VALVES  
FOR  
HIGH PRESSURE STEAM



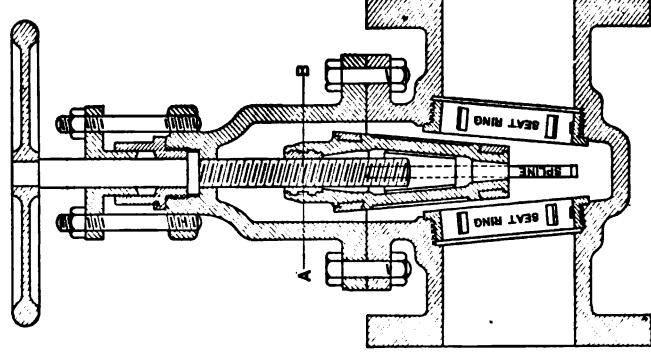
TOP VIEW  
SHOWING WHEEL



SECTION A B  
SHOWING CAP FLANGE AND SPLINES



TRANSVERSE CROSS SECTION  
BOLT TOP INSIDE SCREW

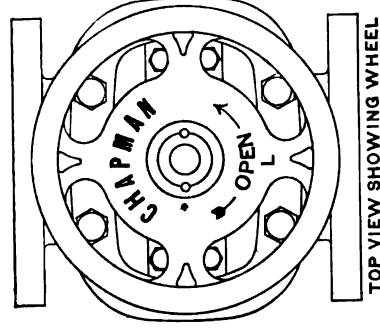


LONGITUDINAL CROSS SECTION  
BOLT TOP INSIDE SCREW

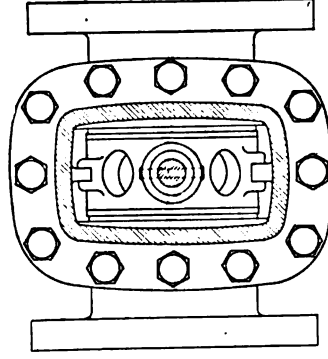
FIG. 177

**IRON BODY BRONZE SEAT GATE VALVES  
FOR  
HIGH PRESSURE STEAM**

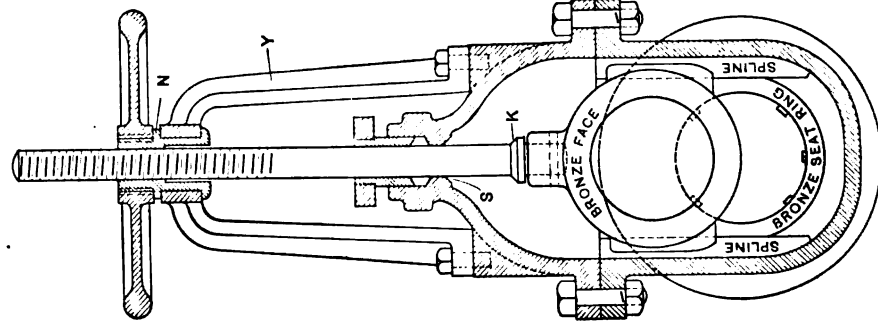
LISTS NOS. 41, 43, 45 AND 46



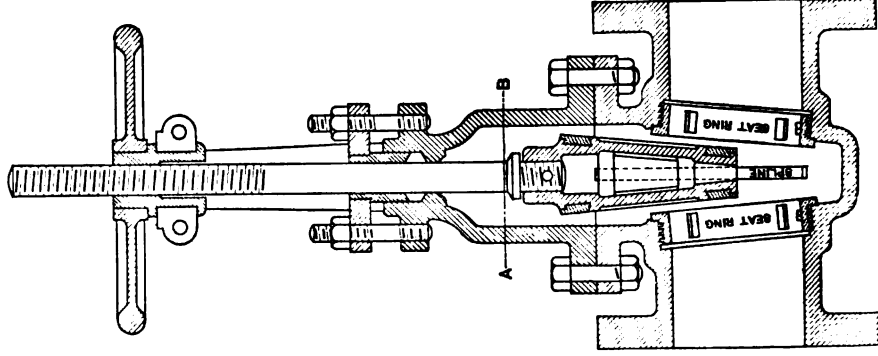
TOP VIEW SHOWING WHEEL



SECTION A-B  
SHOWING CAP FLANGE AND SPLINES



TRANSVERSE CROSS-SECTION



LONGITUDINAL CROSS-SECTION

FIG. 178--BOLT TOP OUTSIDE SCREW

IRON BODY BRONZE SEAT GATE VALVES

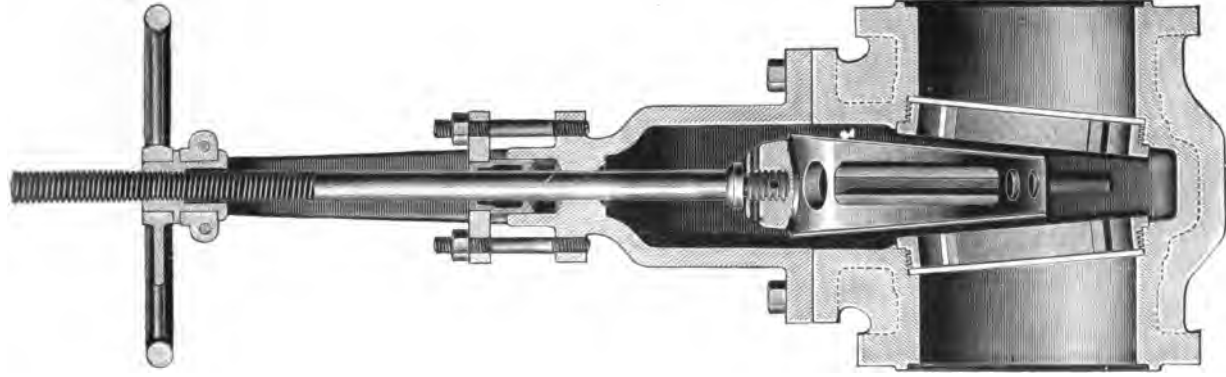


FIG. 179

SECTION OF OUTSIDE SCREW VALVE  
WITH RIBS AND TONGUED FLANGES

**IRON BODY BRONZE SEAT GATE VALVES  
FOR HIGH PRESSURE STEAM**

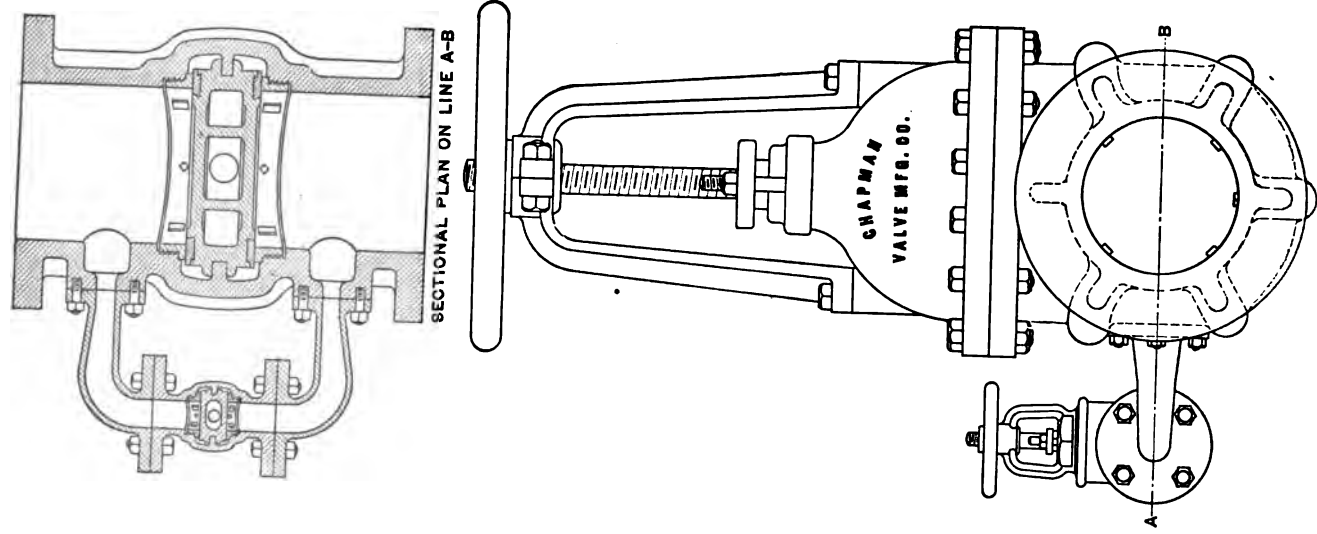


FIG. 180  
OUTSIDE SCREW VALVE WITH RIBS AND BY-PASS  
IRON BODY BRONZE SEAT GATE VALVES

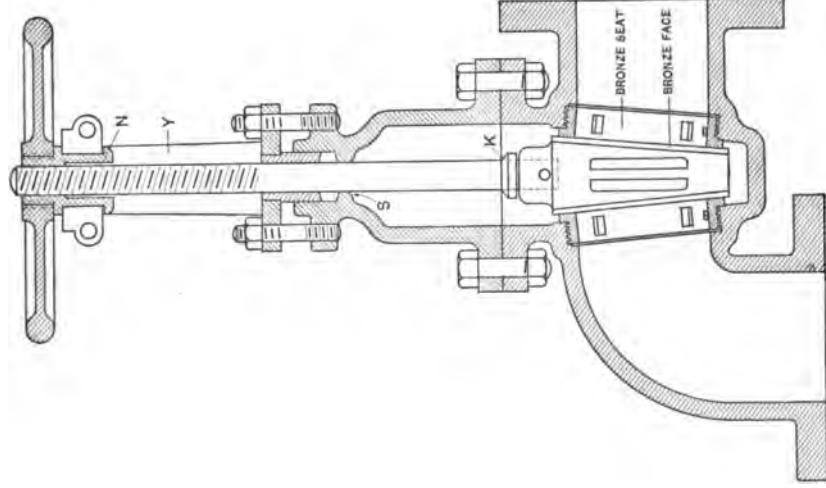


FIG. 181

BOLT TOP OUTSIDE SCREW  
ANGLE GATE VALVE

IRON BODY BRONZE SEAT GATE VALVES  
FOR  
HIGH PRESSURE STEAM

## CHAPMAN GATE VALVES FOR ENGINE THROTTLE VALVES

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The cuts on the opposite page show two of the Chapman Bronze Seat Gate Valves arranged for use as engine throttles. These valves are fitted with by-pass valves for use in warming up the cylinders and in starting the engine, the main valve being opened after the pressure is equalized on both sides and the engine is up to speed.

We make these valves in both heavy and extra heavy weights, the first suitable for 125 pounds working pressure, and the second for 250 pounds working pressure. The valves are neatly and smoothly painted and are well finished in every respect.

We are prepared to furnish them in either straight or angle pattern, and, if desired, can fit them with special thread on the spindle for quick opening and closing. This thread can be made to give almost any desired rapidity of movement.

The cuts show the spindle of the by-pass valve extended to bring the by-pass wheel convenient to the main valve wheel. For use on vertical engines or in cramped or inconvenient positions we can extend one or both spindles to bring the hand wheels into any desired position and can fit the valves with gearing or floor stands, as desired. For information on gearing and floor stands, see Section VI of this catalogue.

Prices on these valves quoted upon application.

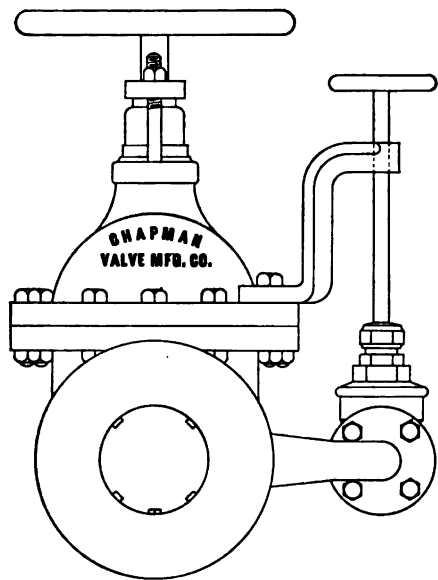


FIG. 182  
INSIDE SCREW

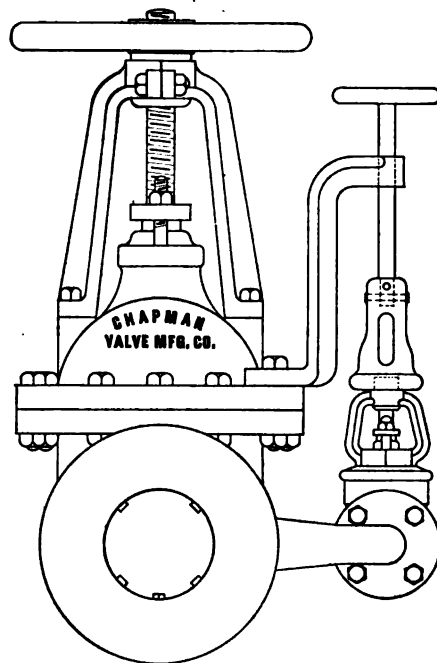


FIG. 183  
OUTSIDE SCREW

**BRONZE SEAT GATE VALVES WITH BY-PASS—ARRANGED FOR ENGINE THROTTLE VALVES**



**HEAVY IRON BODY GATE VALVES FOR HIGH TEMPERATURE STEAM AND WATER****INSIDE OR OUTSIDE SCREW****SCREW OR FLANGE ENDS****RENEWABLE BRONZE SEATS AND BRONZE MOUNTINGS****2 IN. AND SMALLER—160 POUNDS WORKING STEAM PRESSURE****2½ IN. AND LARGER—125 POUNDS WORKING STEAM PRESSURE**

These valves are suitable for high temperature steam and water service of all kinds, such as steam mains, engine throttles and stop valves, receiver piping on multiple-cylinder engines, boiler stop valves, live steam feed water heating and purifying systems, etc. They are designed for a working steam pressure of 125 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. They are made from heavy patterns and have iron bodies, caps and wheels and removable bronze seat rings. Inside screw valves have bronze spindles in all sizes. Outside screw valves 4 inches and smaller have bronze spindles; larger sizes have steel spindles. Bronze spindles furnished in these larger sizes at an additional cost.

The plugs are of solid bronze in the smaller sizes and of cast iron with bronze faces in the larger sizes.

Valves 2 inches and less in size have screw tops and the stuffing-boxes have screw packing-nuts. Larger valves have bolt tops and bolt follower stuffing-boxes. Outside screw valves have the Chapman Self-Packing feature which enables them to be packed while open and under pressure. All stuffing-boxes are packed ready for use.

We furnish the inside screw valves with indicator or inside screw by-pass, and the outside screw valves with outside screw by-pass at an additional cost. We can furnish either type with gearing, floor stand, or special thread for quick opening if desired. We advise by-pass on all valves 12 inches or larger, and quick thread and by-pass on all valves used for engine throttles.

These valves are also furnished with end flanges made to extra heavy dimensions for use with extra heavy flanged fittings, for which a small additional charge is made.

**FOR COMPANION FLANGES SEE LIST 66**



FIG. 184

SCREW END  
INSIDE SCREW



FIG. 185

FLANGE END  
INSIDE SCREW



FIG. 186

FLANGE END  
INSIDE SCREW WITH BY-PASS

**HEAVY IRON BODY BRONZE SEAT VALVES FOR HIGH PRESSURE STEAM**

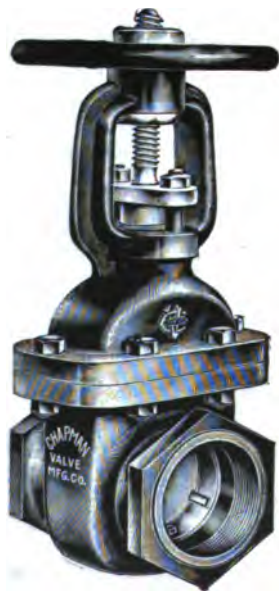


FIG. 187

SCREW END  
OUTSIDE SCREW



FIG. 188

FLANGE END  
OUTSIDE SCREW



FIG. 189

FLANGE END  
OUTSIDE SCREW WITH BY-PASS

**HEAVY IRON BODY BRONZE SEAT VALVES FOR HIGH PRESSURE STEAM**

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 41

PRICE LIST OF HEAVY IRON BODY BRONZE MOUNTED GATE VALVES FOR STEAM AND WATER

RENEWABLE BRONZE SEATS

SCREW OR FLANGE ENDS

		SCREW TOP					BOLT TOP							
DIAMETER OF PORT	INCHES	1	1½	1¾	2	2½	3	3½	4	4½	5	6	7	8
Screw End, Inside Screw			\$5.25	\$7.00	\$9.00	\$16.00	\$19.50	\$23.50	\$28.00	\$36.00	\$37.50	\$46.00	\$56.00	\$68.50
Flange End, " "			6.00	8.00	9.50	17.00	20.00	25.00	29.00	38.00	39.50	48.00	57.00	70.00
By-Pass, " " , Extra											8.00	9.25	9.25	10.50
Screw End, Outside Screw						21.00	24.00	29.00	34.00	43.00	44.00	53.00	64.00	76.00
Flange End, " "						22.00	24.50	30.50	36.00	45.00	46.00	55.00	65.00	78.00
By-Pass, " " , Extra											9.50	11.00	11.00	12.50
Bronze Spindle, " " ,* "										1.40	1.50	3.00	3.10	4.25
Drilling Flanges, "			.12	.12	.12	.16	.16	.16	.16	.16	.20	.25	.35	.40
Weight, Screw End, Inside Screw, lbs.			9	12	19	33	45	64	79	123	136	186	245	311
Weight, Flange End, " " , "			12	18	23	45	56	78	91	137	150	201	270	322
Weight, Screw End, Outside Screw, "						40	53	78	97	146	158	215	277	378
Weight, Flange End, " " , "						52	64	92	109	160	172	230	302	389
Weight, By-Pass, Extra, "											13	17	17	21

\*Outside Screw Valves 4½ inches and larger listed with Steel Spindles; all other valves listed with Bronze Spindles

**CHAPMAN VALVE MANUFACTURING CO.**

**PRICE LIST OF HEAVY IRON BODY BRONZE MOUNTED GATE VALVES FOR STEAM AND WATER**  
**RENEWABLE BRONZE SEATS. SCREW OR FLANGE ENDS**

**LIST NO 41**  
**CONTINUED**

BOLT TOP														
DIAMETER OF PORT    INCHES	9	10	12	14	15	16	18	20	22	24	26	28	30	
Screw End, Inside Screw	\$83.00	\$100.00	\$142.00											
Flange End,        "        "	85.00	103.00	138.00	\$177.00	\$214.00	\$245.00	\$312.00	\$370.00	\$435.00	\$538.00			\$830.00	
By-Pass,            "        " Extra	10.50	10.50	12.50	12.50	15.00	15.00	15.00	21.50	21.50	30.00			30.00	
Screw End, Outside Screw	90.00	110.00	148.00											
Flange End,        "        "	93.00	112.00	144.00	181.00	230.00	260.00	330.00	385.00	455.00	555.00			845.00	
By-Pass,            "        " Extra	12.50	12.50	14.50	14.50	17.75	17.75	17.75	24.25	24.25	34.50			34.50	
Bronze Spindle, "        " * "	4.65	7.85	9.50	11.75	16.75	17.25	22.25	30.00	37.00	39.00			64.00	
Drilling Flanges,        "	1.10	1.40	2.00	2.50	3.10	3.75	4.35	5.40	6.35	7.35	9.75		11.00	
Weight, Scr. End, Ins. Scr., lbs.	399	486	740											
Weight, Flg. End, "        "        "	411	489	724	946	1150	1322	1776	2100	2470	3240			5850	
Weight, Scr. End, Outs. "        "	454	554	789											
Weight, Flg. End, "        "        "	466	557	773	1025	1260	1415	1910	2250	2620	3400			6100	
Weight, By-Pass, Extra,        "	21	21	25	25	32	32	32	45	45	105	105		105	
*Outside Screw Valves 4½ inches and larger are listed with Steel Spindles—all other valves listed with Bronze Spindles														

\*Outside Screw Valves 4½ inches and larger are listed with Steel Spindles—all other valves listed with Bronze Spindles

**HEAVY IRON BODY ANGLE GATE VALVES FOR HIGH TEMPERATURE STEAM AND WATER****INSIDE OR OUTSIDE SCREW****SCREW OR FLANGE ENDS****RENEWABLE BRONZE SEATS AND BRONZE MOUNTINGS****2 IN. AND SMALLER—150 POUNDS WORKING STEAM PRESSURE****2 1/2 IN. AND LARGER—125 POUNDS WORKING STEAM PRESSURE**

---

These valves are suitable for high temperature steam and water service of all kinds, such as steam mains, engine throttle and stop valves, receiver piping in multiple-cylinder engines, boiler stop valves, live steam feed water heating and purifying systems, etc. They occupy less room than an elbow and ordinary valve and save one joint in the pipe line. The angle ends are of good radius.

These valves are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. They have iron bodies, caps and wheels, steel or bronze spindles and removable bronze seat rings. The plugs are of solid bronze in the smaller sizes and of cast iron with bronze faces in the larger sizes. The stuffing-boxes of the inside screw valves, 2 inches and smaller, have screw packing-nuts; all other valves have bolt follower stuffing-boxes. The outside screw valves have the Chapman Self-Packing device, enabling them to be packed while open and under pressure. All stuffing-boxes are packed ready for use.

We furnish the inside screw valves with indicator or inside screw by-pass valve and the outside screw valves with outside screw by-pass valve at an additional cost. We can furnish either type with gearing or special thread for quick opening if desired. We advise by-pass on all valves 12 inches and larger in size and quick thread on all valves used for engine throttles.

These valves are also furnished with end flanges made to extra heavy dimensions, for use with extra heavy flanged fittings, for which a small additional charge is made.

**FOR COMPANION FLANGES SEE LIST NO. 68**



FIG. 190

FLANGE END—INSIDE SCREW



FIG. 191

FLANGE END—OUTSIDE SCREW

**HEAVY IRON BODY BRONZE SEAT ANGLE GATE VALVES FOR HIGH PRESSURE STEAM**

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 42

PRICE LIST OF HEAVY IRON BODY BRONZE MOUNTED ANGLE GATE VALVES FOR STEAM AND WATER

RENEWABLE BRONZE SEATS

SCREW OR FLANGE ENDS

		SCREW TOP				BOLT TOP			
DIAMETER OF PORT	INCHES	1	1½	1½	2	2½	3	3½	4
Screw End,	Inside Screw				\$10.00	\$19.25	\$23.50	\$28.25	\$33.25
Flange End,	" "				11.00	19.75	24.00	29.00	34.00
By-Pass,	" " , Extra								
Screw End,	Outside Screw					24.00	28.00	34.25	40.00
Flange End,	" "					24.50	28.50	35.00	40.75
By-Pass,	" " , Extra								
Bronze Spindle,	" " ,* "								
Drilling Flanges,	" " , "			.12	.12	.16	.16	.16	.16
Weight, Screw End,	Inside Screw, lbs.				21	37	50	70	86
Weight, Flange End,	" " , "				26	49	61	84	98
Weight, Screw End,	Outside Screw, "					44	58	84	104
Weight, Flange End,	" " , "					56	69	98	116
Weight, By-Pass,	Extra, "								

\*Outside Screw Valves 4½ inches and larger listed with Steel Spindles; all other valves listed with Bronze Spindles



**CHAPMAN VALVE MANUFACTURING CO.**

**LIST NO. 42**  
**CONTINUED**

**PRICE LIST OF HEAVY IRON BODY BRONZE MOUNTED ANGLE GATE VALVES FOR STEAM AND WATER**

**RENEWABLE BRONZE SEATS**

**SCREW OR FLANGE ENDS**

		BOLT TOP									
DIAMETER OF PORT	INCHES	4½	5	6	7	8	9	10	12	14	15
Screw End, Inside Screw		\$43.50	\$46.00	\$58.00	\$74.00	\$91.00					
Flange End, " "		44.00	46.00	56.00	68.00	84.00	\$102.00	\$126.00			
By-Pass, " " , Extra			8.00	9.25	9.25	10.50	10.50	10.50	\$12.50	\$12.50	
Screw End, Outside Screw		50.00	53.00	65.00	82.00	98.00					
Flange End, " "		50.50	53.00	63.00	76.00	91.00	110.00	136.00			
By-Pass, " " , Extra			9.50	11.00	11.00	12.50	12.50	12.50	14.50	14.50	
Bronze Spindle, " " ,* "		1.40	1.50	3.00	3.10	4.25	4.65	7.85	9.50	11.75	
Drilling Flanges, "		.16	.20	.25	.35	.40	1.10	1.40	2.00	2.50	
Weight, Screw End, Inside Screw, lbs.		133	150	204	262	346	451	549			
Weight, Flange End, " " , "		143	165	221	296	356	457	532			
Weight, Screw End, Outside Screw, "		156	172	233	294	413	506	617			
Weight, Flange End, " " , "		166	187	250	328	423	512	600			
Weight, By-Pass, Extra, "			13	17	17	21	21	21			

\*Outside Screw Valves 4½ inches and larger are listed with Steel Spindles; all other valves listed with Bronze Spindles

**INSIDE OR OUTSIDE SCREW****SCREW OR FLANGE ENDS****REMOVABLE BRONZE SEATS AND BRONZE MOUNTINGS****250 POUNDS WORKING STEAM PRESSURE**

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These valves are suitable for extra high pressure and temperature steam and water service of all kinds, such as steam mains, engine throttle and stop valves, boiler stop valves, live steam feed water heating and purifying systems, etc. They are designed for a working steam pressure of 250 pounds per square inch and have a factor or safety amply large to cover the ordinary stresses of expansion and water hammer.

They are made from extra heavy patterns and have iron bodies, caps and wheels and removable bronze seat rings. Inside screw valves have bronze spindles in all sizes. Outside screw valves, 4 inches and less in size, have bronze spindles; the larger sizes have steel spindles. Bronze spindles furnished in these larger sizes at an additional cost.

The plugs are of solid bronze in the smaller sizes and of iron with bronze faces in the larger sizes. Valves 2 inches and less in size have screw tops; larger valves have bolt tops. Screw top inside screw valves have driving gland stuffing-boxes; all other valves have bolt follower boxes. All stuffing-boxes are packed ready for use. The outside screw valves have the Chapman Self-Packing feature, enabling them to be packed while open and under pressure.

We furnish the inside screw valves with indicator or inside screw by-pass and the outside screw valves with outside screw by-pass at an additional cost. Either type can be furnished with gearing or special thread for quick opening, if desired.

We advise by-pass on all valves 12 inches and larger in size and quick thread and by-pass on all valves used for engine throttles. For use in lines subjected to excessive stresses from the expansion and contraction due to the high temperature of heavy pressure or superheated steam, we furnish these valves with heavy longitudinal ribs extending from flange to flange. These ribs effectually prevent any springing or distortion of the valve body or flanges under the stress. They can be applied to either inside or outside screw valves, with or without by-pass. Unless otherwise ordered, we put them on all valves 12 inches and larger in size. If desired, we furnish flange end valves with male tongues or splines on the flange faces as shown in Fig. 197.

**FOR COMPANION FLANGES SEE LIST 70**

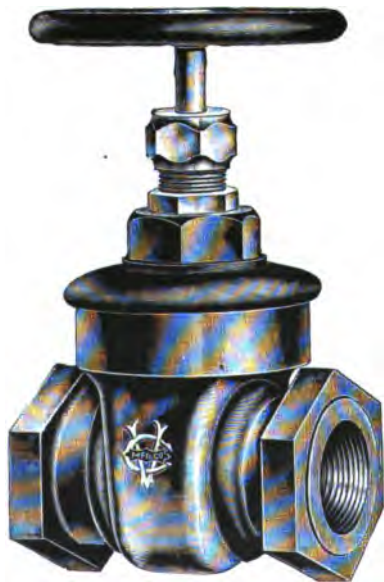


FIG. 192

SCREW END SCREW TOP  
INSIDE SCREW

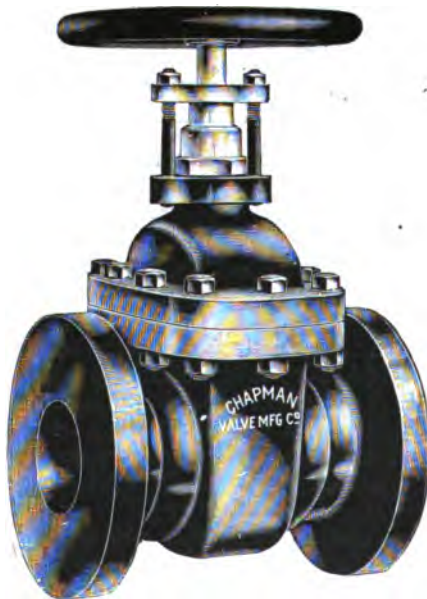


FIG. 193

FLANGE END BOLT TOP  
INSIDE SCREW

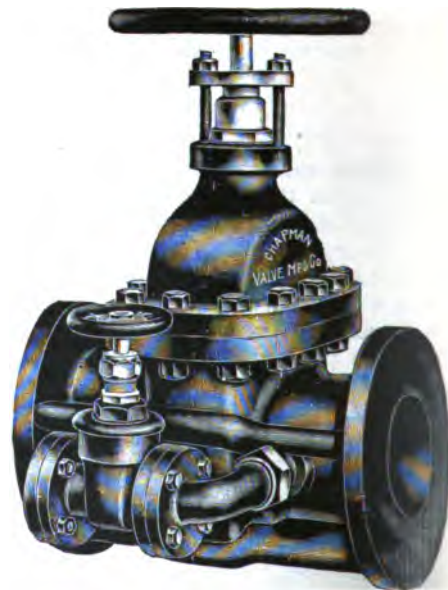


FIG. 194

FLANGE END INSIDE SCREW  
WITH RIBS AND BY-PASS

**EXTRA HEAVY IRON BODY BRONZE SEAT VALVES FOR HIGH PRESSURE STEAM**

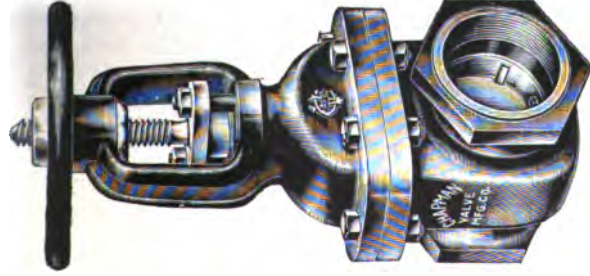


FIG. 195  
SCREW END—OUTSIDE SCREW

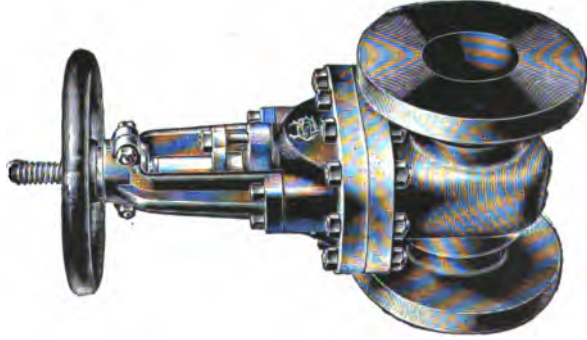


FIG. 196  
FLANGE END—OUTSIDE SCREW

**EXTRA HEAVY IRON BODY BRONZE SEAT VALVES  
FOR HIGH PRESSURE STEAM**

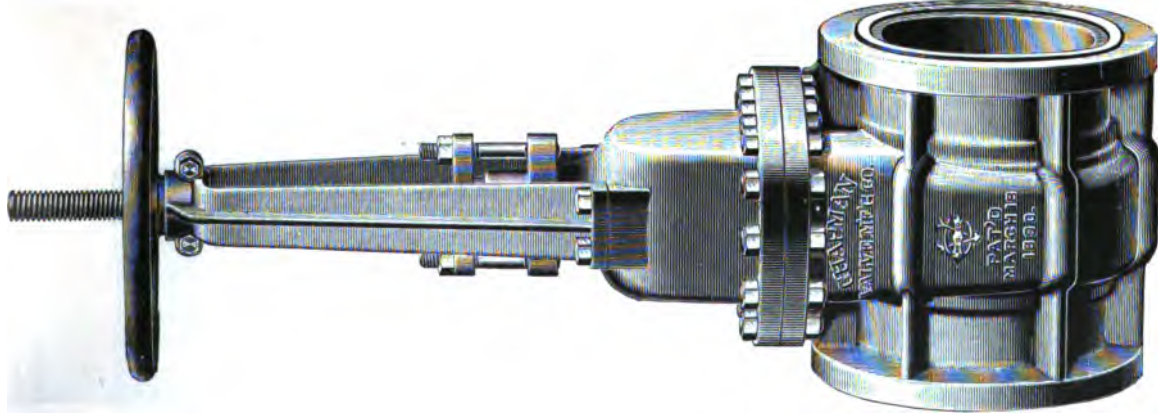


FIG. 197  
FLANGE END—OUTSIDE SCREW  
WITH RIBS AND TONGUE

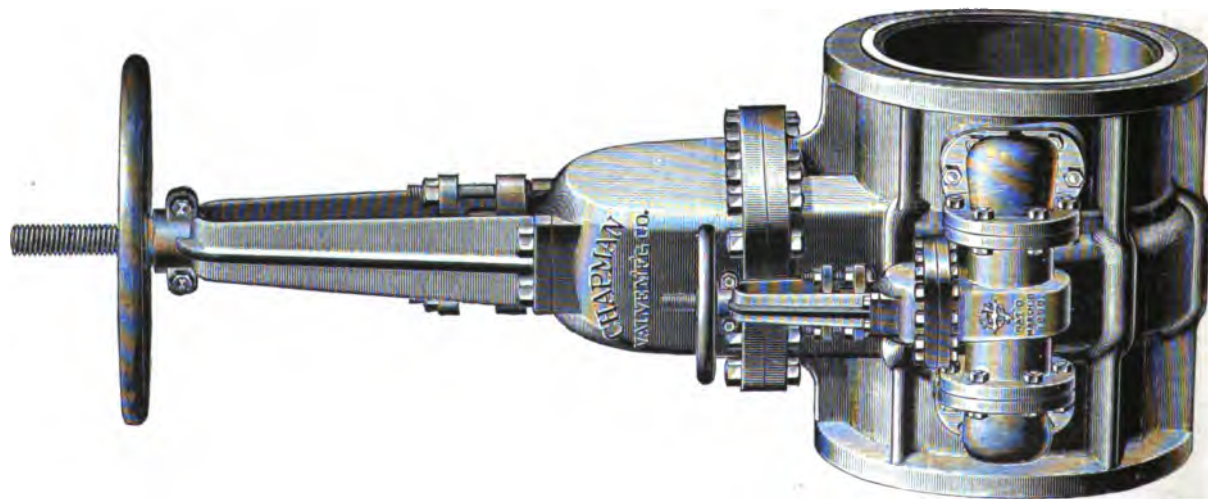


FIG. 198

FLANGE END OUTSIDE SCREW VALVE  
WITH BY-PASS, RIBB AND TONGUE

**EXTRA HEAVY IRON BODY BRONZE SEAT VALVES**

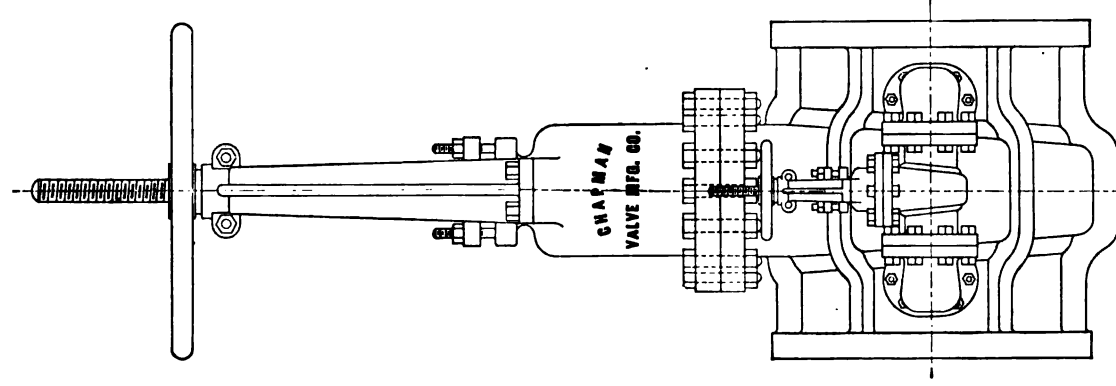


FIG. 199

SIDE ELEVATION

**EXTRA HEAVY IRON BODY BRONZE SEAT VALVE  
WITH RIBS AND BY-PASS  
FOR HIGH PRESSURE STEAM**

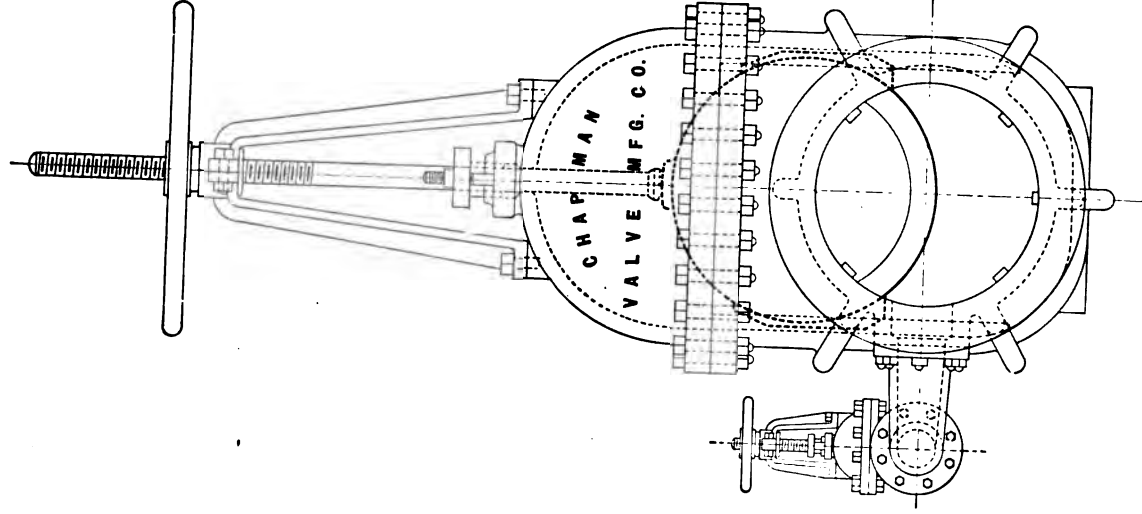


FIG. 200

END ELEVATION

EXTRA HEAVY IRON BODY BRONZE SEAT VALVES  
WITH RIBS AND BY-PASS  
FOR HIGH PRESSURE STEAM

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 43

PRICE LIST OF EXTRA HEAVY IRON BODY BRONZE MOUNTED GATE VALVES FOR STEAM AND WATER

RENEWABLE BRONZE SEATS

SCREW OR FLANGE ENDS

		SCREW TOP					BOLT TOP							
DIAMETER OF PORT	INCHES	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7
Screw End, Inside Screw			\$7.00	\$8.00	\$9.50	\$12.00	\$21.50	\$26.50	\$29.50	\$35.00	\$44.50	\$52.00	\$63.50	\$75.50
Flange End, " "			8.00	9.00	10.50	13.50	22.50	28.50	31.50	37.50	46.50	54.00	66.50	81.50
By-Pass, " " , Extra												17.00	17.00	18.00
Screw End, Outside Screw			9.00	10.50	12.50	16.00	25.00	30.50	35.50	42.50	53.00	58.00	72.00	85.00
Flange End, " "			10.00	11.25	13.50	17.00	26.50	32.50	37.50	45.50	55.00	60.00	75.50	91.50
By-Pass, " " , Extra												19.50	19.50	20.25
Bronze Spindle, " " * "											3.00	3.75	4.75	6.25
Ribs for Valves without By-Pass, "												3.50	3.50	3.50
Ribs for Valves with By-Pass, "												4.00	4.00	4.00
Drilling Flanges, "			.20	.20	.20	.20	.35	.35	.40	.55	.80	1.00	1.50	1.75
Tongueing Flanges, "			.45	.50	.55	.60	1.25	1.40	1.50	1.50	1.50	1.75	1.75	1.75
Weight, Screw End, Inside Screw, lbs.			15	17	23	33	54	90	105	130	182	237	304	401
Weight, Flange End, " " , "			18	21	29	41	68	107	125	152	204	265	340	435
Weight, Screw End, Outside Screw, "			16	18	24	34	58	94	117	142	201	259	354	436
Weight, Flange End, " " , "			19	22	30	42	72	111	137	164	223	287	380	470
Weight, Ribs, Extra												52	52	56
Weight, By-Pass, "												57	57	69

\*Outside Screw Valves  $4\frac{1}{2}$  inches and larger are listed with Steel Spindle; all other valves listed with Bronze Spindle



**CHAPMAN VALVE MANUFACTURING CO.**

**PRICE LIST OF EXTRA HEAVY IRON BODY BRONZE MOUNTED GATE VALVES FOR STEAM AND WATER**

**LIST No 43**  
**CONTINUED**

**RENEWABLE BRONZE SEATS**

**SCREW OR FLANGE ENDS**

DIAMETER OF PORT INCHES	8	9	10	12	14	15	16	18	20	22	24	
Screw End, Inside Screw	\$90.00											
Flange End, " "	96.50	\$116.00	\$138.00	\$190.00	\$238.00	\$280.00	\$315.00	\$390.00	\$472.00	\$561.00	\$670.00	
By-Pass, " " Extra	21.00	22.00	22.50	28.00	30.00	32.00	65.00	69.00	88.00	90.00	94.00	
Screw End, Outside Screw	101.00											
Flange End, " "	107.00	125.00	146.00	195.00	243.00	296.00	332.00	413.00	487.00	594.00	700.00	
By-Pass, " " Extra	24.00	25.00	25.50	32.00	34.00	36.00	70.00	73.00	96.00	99.00	101.00	
Bronze Spindle, " " * "	7.25	7.85	10.50	12.50	14.50	17.50	18.25	25.00	39.50	41.75	44.50	
Ribs for V. without By-Pass, "	4.00	4.00	5.00	7.00	7.50	9.00	9.00	10.00	12.00	14.50	16.00	
Ribs for V. with By-Pass, "	4.50	5.00	6.00	8.00	9.00	10.00	14.00	15.00	17.00	20.00	21.00	
Drilling Flanges, "	1.75	2.10	2.50	3.50	5.00	5.25	5.75	8.00	9.75	11.75	13.00	
Tongueing Flanges, "	2.25	2.60	3.00	3.50	6.75	9.75	12.00	14.00	15.75	18.25	20.00	
Weight, Scr. End, Ins. Scr., lbs.	444											
Weight, Flg. End, " " "	505	597	748	1126	1407	1706	1892	2440	2875	3700	4275	
Weight, Scr. End, Outs. " "	511											
Weight, Flg. End, " " "	567	660	805	1185	1475	1800	2000	2650	3025	3875	4575	
Weight, By-Pass, Extra, "	90	100	107	140	162	183	459	494	642	662	682	
Weight, Rib, " , "	58	66	80	83	97	105	159	165	175	216	246	

\*Outside Screw Valves 4½ inches and larger are listed with Steel Spindles—all other valves listed with Bronze Spindles  
Valves 12 inch and larger are furnished with Rib and By-Pass unless otherwise ordered

## IRON BODY BRONZE SEAT STEAM VALVES WITH GLOBE BY-PASS

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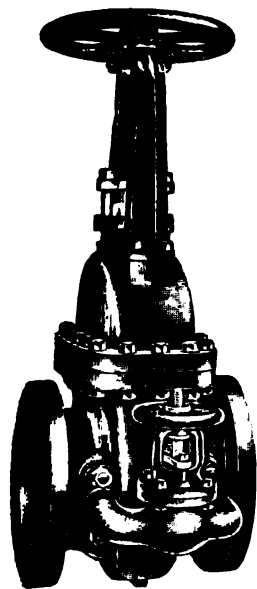


FIG. 201

The accompanying cut shows one of our extra heavy steam valves fitted with a special by-pass of the globe valve type. The by-pass valve and pipes are made in one U-shaped casting and the number of joints is reduced to a minimum. The by-pass valve is a special globe valve with bronze disk, bronze spindle and mountings, and renewable bronze seat rings. It is made from extra heavy patterns and is constructed with special reference to the service; all working parts may be easily renewed when worn or injured.

The by-pass valve is made with inside or outside screw to match the main valve. The outside screw valves are self-packing, enabling the stuffing-box to be packed while the valve is wide open and under full pressure. The by-pass spindle may be at right angles to the main spindle if so ordered instead of parallel with it as shown in the cut. Valves equipped with this style of by-pass have the same length face to face as the regular extra heavy valve without by-pass and are somewhat lower in price on account of the saving in metal. Prices on straight or angle valves with this by-pass furnished on application.

**EXTRA HEAVY IRON BODY ANGLE GATE VALVES FOR HIGH TEMPERATURE STEAM AND WATER**

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

REMOVABLE BRONZE SEATS AND BRONZE MOUNTINGS

250 POUNDS WORKING STEAM PRESSURE

These valves are suitable for extra high pressure and temperature steam and water service of all kinds, such as steam mains, engine throttle and stop valves, boiler stop valves, live steam feed water heating and purifying systems, etc. They occupy much less room than an elbow and straight valve and save one joint in the pipe line; the angle ends are of good radius. They are designed for a working pressure of 250 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer.

These valves are made from extra heavy patterns and have iron bodies, caps and wheels, steel or bronze spindles and removable bronze seat rings. The plugs are of solid bronze in the smaller sizes and of cast iron with bronze faces in the larger sizes. Valves 2 inches and less in size have screw tops; the larger valves have bolt tops. Screw top inside screw valves have driving gland stuffing-boxes; all other valves have bolt follower boxes. All stuffing-boxes are packed ready for use.

The outside screw valves have the Chapman Self-Packing feature, enabling them to be packed while open and under pressure.

We furnish the inside screw valves with indicator or inside screw by-pass valves and the outside screw valves with outside screw by-pass valve, at an additional cost. We can furnish either type with gearing or special thread for quick opening, if desired.

We advise by-pass on all valves 12 inches and larger in size and quick thread on all valves used for engine throttles.

For use in lines subjected to excessive stresses from the expansion and contraction due to the high temperature of heavy pressure or superheated steam, we furnish these valves with heavy longitudinal ribs, as shown in Fig. 197. These ribs effectually prevent any springing or distortion of the valve body or flanges under the stress. They can be applied to either inside or outside screw valves, with or without by-pass. Unless otherwise ordered, we put them on all valves 12 inches and larger in size.

If desired, we furnish the flange end valves with male tongues or splines on the faces of the flanges.

FOR COMPANION FLANGES SEE LIST 70

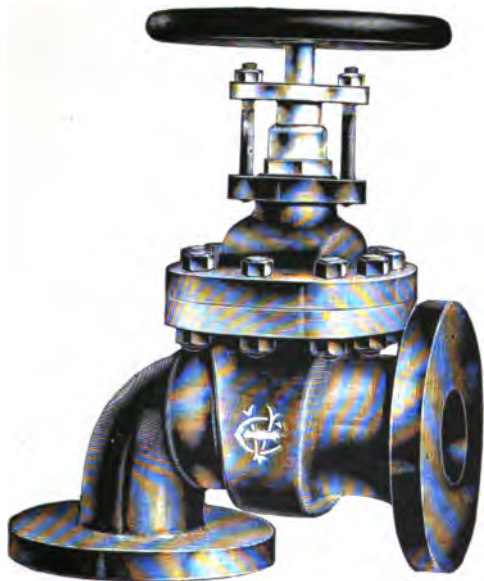


FIG. 202

FLANGE END—INSIDE SCREW

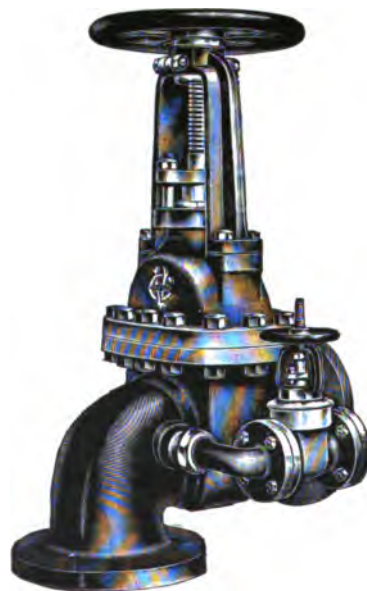


FIG. 203

OUTSIDE SCREW WITH BY-PASS

**EXTRA HEAVY IRON BODY BRONZE SEAT ANGLE GATE VALVES FOR HIGH PRESSURE STEAM**

**PRICE LIST OF EXTRA HEAVY IRON BODY BRONZE MOUNTED ANGLE GATE VALVES FOR STEAM AND WATER**  
**RENEWABLE BRONZE SEATS** **SCREW OR FLANGE ENDS**

		SCREW TOP				BOLT TOP				
DIAMETER OF PORT	INCHES	1	1½	1½	2	2½	3	3½	4	4½
Screw End,	Inside Screw				\$13.75	\$24.75	\$30.50	\$34.50	\$41.50	\$52.00
Flange End,	" "				15.00	25.50	32.00	36.50	43.50	53.00
By-Pass,	" " , Extra									
Screw End,	Outside Screw				17.50	28.50	35.00	41.00	49.00	61.00
Flange End,	" "				18.75	29.25	36.50	43.00	51.00	62.00
By-Pass,	" " , Extra									
Bronze Spindle,	" " , * "									3.00
Ribs for Valves without By-Pass,	"									
Ribs for Valves with By-Pass,	"									
Drilling Flanges,	"			.20	.20	.35	.35	.40	.55	.80
Tongueing Flanges,	"			.55	.60	1.25	1.40	1.50	1.50	1.50
Weight, Screw End,	Inside Screw, lbs.				36	58	94	118	148	203
Weight, Flange End,	" " , "				44	72	111	138	170	225
Weight, Screw End,	Outside Screw, "				37	62	98	130	160	222
Weight, Flange End,	" " , "				45	76	115	150	182	244
Weight, By-Pass,	Extra, "									
Weight, Ribs,	" , "									

\*Outside Screw Valves 4½ inches and larger listed with Steel Spindles; all other valves listed with with Bronze Spindles

**CHAPMAN VALVE MANUFACTURING CO.**

**LIST No. 44**  
CONTINUED

**PRICE LIST OF EXTRA HEAVY IRON BODY BRONZE MOUNTED ANGLE GATE VALVES FOR STEAM AND WATER**

RENEWABLE BRONZE SEATS

SCREW OR FLANGE ENDS

		BOLT TOP								
DIAMETER OF PORT	INCHES	5	6	7	8	9	10	12	14	15
Screw End,	Inside Screw	\$61.00	\$77.00	\$95.00	\$114.00					
Flange End,	" "	61.00	76.00	93.00	112.00	\$138.00	\$169.00			
By-Pass,	" " , Extra	17.00	17.00	18.00	21.00	22.00	22.50	\$28.00	\$30.00	
Screw End,	Outside Screw	67.00	85.50	105.00	125.00					
Flange End,	" "	67.00	84.50	103.00	123.00	146.00	176.00			
By-Pass,	" " , Extra	19.50	19.50	20.25	24.00	25.00	25.50	32.00	34.00	
Bronze Spindle,	" " , * "	3.75	4.75	6.25	7.25	7.85	10.50	12.50	14.50	
Ribs for Valves without By-Pass,	"	3.50	3.50	3.50						
Ribs for Valves with By-Pass,	"	4.00	4.00	4.00						
Drilling Flanges,	"	1.00	1.50	1.75	1.75	2.10	2.50	3.50	5.00	
Tongueing Flanges,	"	1.75	1.75	1.75	2.25	2.60	3.00	3.50	6.75	
Weight, Screw End,	Inside Screw, lbs.	260	321	456	482					
Weight, Flange End,	" " , "	288	357	490	538	722	896			
Weight, Screw End,	Outside Screw, "	282	371	491	549					
Weight, Flange End,	" " , "	310	397	525	605	785	953			
Weight, By-Pass,	Extra, "	57	57	69	90	100	107			
Weight, Ribs,	" , "							83	97	

\*Outside Screw Valves 4½ inches and larger listed with Steel Spindles; all other valves listed with Bronze Spindles

**INSIDE OR OUTSIDE SCREW****FLANGE ENDS****REMOVABLE BRONZE SEATS AND BRONZE MOUNTINGS****2 IN. AND SMALLER—150 POUNDS WORKING STEAM PRESSURE****2½ IN. AND LARGER—125 POUNDS WORKING PRESSURE**

---

These valves are intended for use as boiler blow-off valves and are especially designed for the hard service incident to such positions. The operation is as follows: In blowing off, first fully open the valve nearest the boiler; then open the outside valve. When done blowing off, close the outside valve first; then close the inside valve. This makes all the wear come on the outside valve, leaving the valve nearest the boiler tight all the time. By using flange end valves, the worn valve can be easily taken out for repairs. The seat rings, plugs and all working parts are interchangeable and can be replaced by new ones, if necessary. The valves are designed for the above working pressures and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. They are made from heavy patterns and have iron bodies, caps and wheels, solid bronze plugs, bronze spindles, and removable bronze seat rings.

The stuffing-boxes of the inside screw valves, 2 inches and smaller, have screw packing-nuts; the larger sizes have bolt followers. The outside screw valves have bolt follower stuffing-boxes and are fitted with the Chapman Self-Packing Device, enabling them to be packed while open and under pressure. All stuffing-boxes are packed ready for use.

We furnish these valves with straight ends, or with one angle end, the latter being desirable when it is necessary to make a right-angled turn near the boiler, as it saves one joint in the pipe line.

If desired, we furnish them with companion flanges bolted on.

**FOR COMPANION FLANGES SEE LIST 66**

## PRICE LIST OF HEAVY IRON BODY BRONZE MOUNTED DOUBLE BLOW-OFF VALVES

RENEWABLE BRONZE SEATS

FLANGE ENDS

		SCREW TOP			BOLT TOP			
DIAMETER OF PORT	INCHES	1½	1½	2	2½	3	3½	4
Straight Pattern,	Inside Screw	\$12.75	\$16.00	\$19.50	\$34.00	\$41.00	\$50.00	\$59.00
Angle Pattern,	" "			21.00	37.00	45.00	54.50	64.00
Straight Pattern,	Outside Screw				43.50	49.50	62.00	72.00
Angle Pattern,	" "				46.50	53.50	66.50	77.00
Drilling End Flanges,	Extra	.12	.12	.12	.16	.16	.16	.16
Weight, Straight Pattern,	Inside Screw, lbs.	26	38	49	94	116	161	187
Weight, Angle Pattern,	" " "			52	98	121	167	194
Weight, Straight Pattern,	Outside Screw, "				108	132	189	223
Weight, Angle Pattern,	" " "				112	137	195	230





FIG. 204

SCREW TOP—INSIDE SCREW  
STRAIGHT PATTERN



FIG. 205



FIG. 206

BOLT TOP—OUTSIDE SCREW  
ANGLE PATTERN

**HEAVY AND EXTRA HEAVY IRON BODY BRONZE MOUNTED DOUBLE BLOW-OFF VALVES**



FIG. 207  
SCREW TOP—OUTSIDE SCREW



FIG. 208  
BOLT TOP—OUTSIDE SCREW

STRAIGHT PATTERN

**HEAVY AND EXTRA HEAVY IRON BODY BRONZE MOUNTED DOUBLE BLOW-OFF VALVES**

**EXTRA HEAVY IRON BODY BLOW-OFF VALVES****INSIDE OR OUTSIDE SCREW****FLANGE ENDS****REMOVABLE BRONZE SEATS AND BRONZE MOUNTINGS****250 POUNDS WORKING STEAM PRESSURE.**

These valves are intended for use as boiler blow-off valves and are especially designed for the hard service incident to such positions. The operation is as follows: In blowing off, first open fully the valve nearest the boiler; then open the outside valve. When done blowing off close the outside valve first; then close the inside valve. This makes all the wear come on the outside valve, leaving the valve next the boiler tight all the time. By using flange end valves the worn valve can be easily taken out for repairs. The seat rings, plugs and all working parts are interchangeable and can be replaced by new ones, if necessary.

These valves are designed for a working pressure of 250 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of expansion and water hammer. They are made from extra heavy patterns and have iron bodies, caps and wheels, solid bronze plugs, bronze spindles and removable bronze seat rings. The 1¼, 1½ and 2 inch inside screw valves have driving gland stuffing-boxes; the larger sizes have bolt follower stuffing-boxes. Outside screw valves have bolt follower boxes in all sizes and are fitted with the Chapman Self-Packing Device, enabling them to be packed while open and under pressure. All stuffing-boxes are packed ready for use.

We furnish these valves with straight ends as per Fig. 205 or with one angle end as per Fig. 206 and with plain faced end flanges. If desired, we furnish them with extra heavy companion flanges bolted on.

**FOR COMPANION FLANGES SEE LIST 70**

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 46

PRICE LIST OF EXTRA HEAVY IRON BODY BRONZE MOUNTED DOUBLE BLOW-OFF VALVES

RENEWABLE BRONZE SEATS

FLANGE ENDS

		SCREW TOP			BOLT TOP			
DIAMETER OF PORT	INCHES	1½	1½	2	2½	3	3½	4
Straight Pattern,	Inside Screw	\$18.50	\$22.00	\$27.50	\$46.00	\$58.00	\$64.00	\$77.00
Angle Pattern,	" "			29.00	49.00	61.50	69.00	83.00
Straight Pattern,	Outside Screw	22.50	27.50	35.00	53.50	66.50	76.50	93.00
Angle Pattern,	" "			36.50	56.50	70.00	81.50	99.00
Drilling End Flanges,	Extra	.20	.20	.20	.35	.35	.40	.55
Finished Weight, Straight Pattern,	Inside Screw, lbs.	44	60	86	141	219	256	310
Finished Weight, Angle Pattern,	" " "			89	145	223	269	328
Finished Weight, Straight Pattern,	Outside Screw, "	46	62	88	149	227	280	334
Finished Weight, Angle Pattern,	" " "			91	153	231	293	352

## CHAPMAN STEAM CHECK OR AUTOMATIC BOILER STOP VALVE

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This valve, which is shown by the drawings on the opposite page, is made for use in boiler plants having two or more boilers connected to a common steam main. It is intended to be placed in the steam pipe from each boiler at some point between the boiler and the main (preferably as close to the boiler as convenient) and is designed to open and close automatically when, for any reason, there is a difference between the pressure in the boiler and that in the main. It is particularly serviceable in the case of a bursted tube or shell, as it instantly and automatically closes, preventing the escape of steam from the other boilers and main through the disabled one. It is also useful in "cutting in" a boiler, as it opens without further attention as soon as the boiler pressure is raised to a point just exceeding that in the main. Again, it is valuable in equalizing the work on the boilers and thus regulating the firing, since it automatically opens and closes with slight differences of pressure between the boiler and the main. It should always be used in conjunction with the usual positive boiler stop valve.

The valve is made of cast iron with full bronze mountings and renewable bronze seat rings and is in the form of a "swing check" valve of superior design and construction, thus affording a straightway passage of full area for the steam. It is provided with an outside air-compression dash-pot and a balancing lever and weight, by means of which the greatest nicety of adjustment can be secured. This entirely prevents chattering and permits the valve to open and close under very slight variations of pressure. The valve can be arranged to be placed in either a vertical or horizontal position and is made for any required pressure.

Prices and dimensions will be furnished on application.

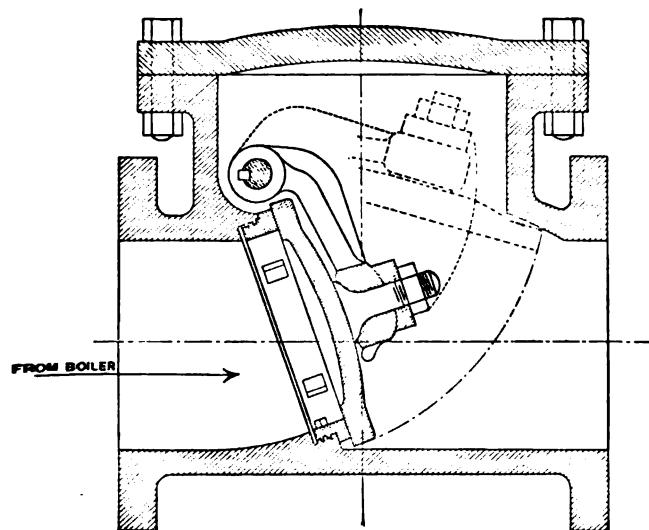


FIG. 209  
LONGITUDINAL SECTION

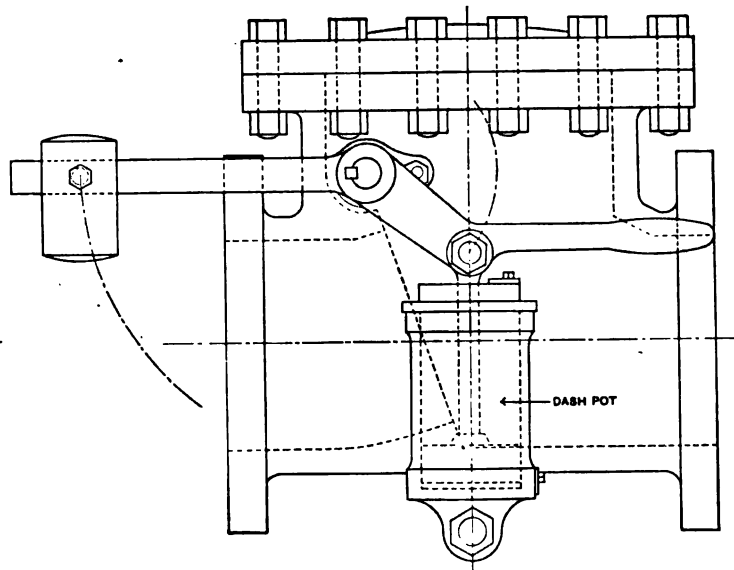


FIG. 210  
ELEVATION

**STEAM CHECK OR AUTOMATIC BOILER STOP VALVE**





#### SECTION IV.

**CHAPMAN IRON AND SEMI-STEEL GATE VALVES**

**WITH**

**BABBITT METAL OR IRON SEATS AND IRON OR  
SEMI-STEEL MOUNTINGS**

**FOR**

**GAS, OIL AND AMMONIA**





**INSIDE OR OUTSIDE SCREW****SCREW OR FLANGE ENDS****BABBITT SEATS AND IRON MOUNTINGS**

These valves are suitable for use in gas and oil systems, air pipes of blowing engines, etc. The outside screw valves are particularly adapted for inside gas and air work, as the rising spindle is a perfect indicator. The valves have a factor of safety amply large to cover the ordinary stresses of expansion, etc. The temperature should not exceed 325 degrees Fahrenheit.

All parts of the valves except the seats and spindles are made of cast iron. The faces of the plug are finished cast iron: the seats are of special babbitt metal, particularly fitted to resist the action of gas and the spindles are of wrought iron, tinned above the thrust collar to prevent corrosion. Inside screw valves 2 inches and smaller have screw packing-nut stuffing-boxes; all other valves have bolt follower stuffing-boxes. All stuffing-boxes are packed ready for use.

The joints are made without gaskets. The seats are plug faces will not corrode together and the valves will open easily and close tightly.

We make these valves with sliding stem and lever and furnish the inside screw valves with indicator or with gearing, at an additional cost. The outside screw valves are made in any size desired and may be fitted with gearing.

**FOR COMPANION FLANGES SEE LIST 71**



FIG. 225

SCREW END—SCREW TOP  
INSIDE SCREW

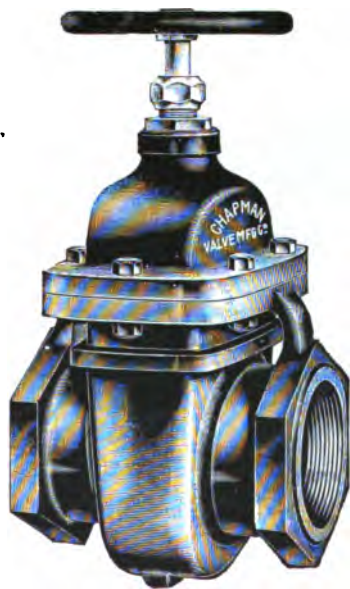


FIG. 226

SCREW END—BOLT TOP  
INSIDE SCREW

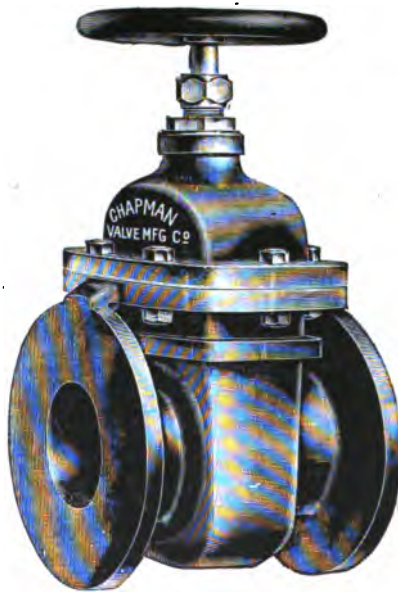


FIG. 227

FLANGE END—BOLT TOP  
INSIDE SCREW

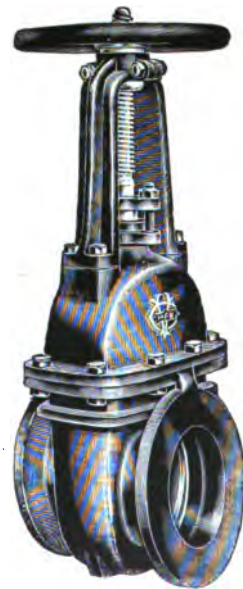


FIG. 228

FLANGE END—BOLT TOP  
OUTSIDE SCREW

**IRON BODY IRON MOUNTED BABBITT SEAT VALVES FOR GAS**



FIG. 229

OUTSIDE SCREW VALVE

WITH

SPECIAL FLOOR STAND YOKE

**IRON BODY IRON MOUNTED BABBITT SEAT VALVES FOR GAS**

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLES NOS. 5 AND 12

LIST NO. 51

PRICE LIST OF IRON BODY IRON MOUNTED BABBITT SEAT GATE VALVES FOR GAS

SCREW OR FLANGE ENDS

		SCREW TOP							BOLT TOP				
DIAMETER OF PORT	INCHES	$\frac{1}{4}$ & $\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$
Screw End, Inside Screw		\$3.00	\$3.25	\$3.65	\$4.35	\$5.00	\$6.10	\$7.85	\$9.20	\$10.80	\$12.00	\$14.00	\$15.80
Flange End, " "		3.40	3.75	4.20	5.00	5.75	7.00	8.85	9.40	11.00	12.50	14.00	15.50
Side Indicator, " " , Extra									2.00	2.00	2.10	2.20	2.70
Navy Indicator, " " , "													
Sliding Stem and Lever, "			1.20	1.45	1.70	1.85	2.45	3.00	4.00	4.30	5.00	5.35	
Screw End, Outside Screw									12.50	14.25	17.00	20.50	23.25
Flange End, " "									12.70	14.50	17.50	20.50	23.00
Drilling Flanges, "					.35	.12	.12	.12	.16	.16	.16	.16	.16
Weight, Screw End, Inside Screw, lbs.		$1\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{4}$	6	$7\frac{1}{4}$	10	16	36	52	60	79	90
Weight, Flange End, " " "		$2\frac{1}{4}$	4	$5\frac{1}{4}$	$8\frac{1}{4}$	11	15	23	44	58	72	86	98
Weight, Screw End, Outside Screw, "									39	55	70	92	105
Weight, Flange End, " " "									47	61	82	99	113

**CHAPMAN VALVE MANUFACTURING CO.**

**FORMER TABLE NO. 12**

**LIST NO. 51  
CONTINUED**

**PRICE LIST OF IRON BODY IRON MOUNTED BABBITT SEAT GATE VALVES FOR GAS**

**SCREW OR FLANGE ENDS**

DIAMETER OF PORT		INCHES	5	6	7	8	9	10	12	14	15	16	18	20
Screw End,	Inside Screw		\$16.80	\$20.00	\$26.50	\$32.50	\$40.50	\$50.00	\$68.00					
Flange End,	" "		16.50	19.00	25.00	30.50	37.00	45.50	58.00	\$77.00	90.00	\$95.00	\$121.00	\$149.00
Side Indicator,	" " , Extra		3.00	3.75	4.00	4.70	5.00	5.65	6.90	8.40	12.25	13.50	16.00	19.50
Navy Indicator,	" " , "													
Geared Indicator,	" " , "					11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
Sliding Stem and Lever,	"													
Spur Gearing,	" " , "												32.00	38.00
Bevel Gearing,	" " , "												31.00	35.00
Screw End,	Outside Screw		25.00	29.50	36.50	43.50	54.00	64.00	81.00					
Flange End,	" "		24.50	28.50	35.00	41.50	51.00	59.00	71.00	92.00	110.00	116.00	144.00	176.00
Drilling Flanges,	Extra		.20	.25	.35	.40	1.10	1.40	2.00	2.50	3.10	3.75	4.35	5.40
Weight, Screw End,	Inside Screw, lbs.		93	139	174	230	288	365	494					
Weight, Flange End,	" " , "		101	142	176	241	290	370	500	681	814	837	1125	1385
Weight, Screw End,	Outside Screw, "		112	162	196	260	350	425	550					
Weight, Flange End,	" " , "		120	165	198	270	355	430	555	755	925	945	1270	1570
Weight, Gearing,	Extra, "												95	135

**CHAPMAN VALVE MANUFACTURING CO.**

**FORMER TABLE NO. 12**

**LIST NO. 51**  
**CONTINUED**

**PRICE LIST OF IRON BODY IRON MOUNTED BABBITT SEAT GATE VALVES FOR GAS**

**FLANGE ENDS**

DIAMETER OF PORT		INCHES	22	24	26	28	30	36	40	42	48	
Flange End,	Inside Screw		\$175.00	\$207.00			\$388.00	\$585.00		\$856.00	\$1347.00	
Side Indicator,	" " , Extra		21.00	23.50								
Gearred Indicator,	" " , "		11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
Spur Gearing,	" " , "		40.00	44.00	44.00		44.00	48.00	54.00	54.00	90.00	
Bevel Gearing,	" " , "		36.00	37.00	37.00		38.00	44.00	51.00	51.00	90.00	
Flange End,	Outside Screw		210.00	240.00								
Drilling Flanges,	"		6.35	7.35	9.75		11.00	13.50	16.25	19.00	21.50	
Weight, Flange End,	Inside Screw, lbs.		1688	2030			3900	5660		8425	12725	
Weight, Flange End,	Outside Screw, "		1930	2230								
Weight, Gearing,	Extra, "		139	150			220	230		260	525	

## IRON BODY BOLT TOP GATE VALVES FOR GAS

INSIDE OR OUTSIDE SCREW

BELL OR SPIGOT ENDS

BABBITT SEATS AND IRON MOUNTINGS



FIG. 230  
INSIDE SCREW

These valves are made especially for use in the street mains of gas works and have never failed to give satisfaction. The joints are made without gaskets. The plug faces and seats, being of different metals, will not corrode together, so that the valve will always open easily and close tightly.

With the exception of the seats and spindles, these valves are made entirely of cast iron. The plug faces are finished cast iron; the seats are of special babbitt metal, particularly fitted to resist the action of gas; and the spindles are of wrought iron, tinned above the thrust collar to prevent corrosion.

They are fitted with bolt gland stuffing-boxes, packed ready for use. Unless otherwise ordered, they are furnished with grooved bell ends for lead joint and with 2 inch square nut on the spindle. We furnish them with wheels on the spindles and with smooth bell ends for cement joint, without extra charge. We can also furnish them with the Chapman Geared Indicator, or with bevel or spur gearing at an additional cost. Geared valves may be fitted with Addicks' Gear Cover and Lubricator, thus avoiding the expense of a masonry gate chamber.

We also furnish these valves with outside screw for use in gate chambers or inside piping in gas works.

**CHAPMAN VALVE MANUFACTURING CO.**

**FORMER TABLE NO. 13**

**LIST NO. 52**

**PRICE LIST OF IRON BODY BABBITT SEAT GATE VALVES FOR GAS**

**BELL OR SPIGOT ENDS**

DIAMETER OF PORT		INCHES	2	3	4	5	6	7	8	9	10	12	14	15
Bell End,	Inside Screw		\$9.00	\$12.00	\$14.50	\$16.50	\$20.00	\$25.50	\$31.00	\$39.00	\$46.00	\$61.00	\$72.00	\$84.00
Spigot End,	" "			12.00	14.50	16.50	20.00	25.50	31.00	39.00	47.00	64.00	76.00	88.00
Spur Gearing,	" " Extra													
Bevel Gearing,	" " "													
Geared Indicator,	"								11.00	11.00	11.00	11.00	11.00	11.00
Bell End,	Outside Screw			15.50	21.00	24.50	29.00	35.50	42.00	52.50	60.50	74.00	87.50	104.00
Weight, Bell End,	Inside Screw, lbs.		33	72	102	109	158	204	260	320	405	577	680	795
Weight, Bell End,	Outside Screw, "		36	85	121	128	181	226	290	383	465	632	745	905
Weight, Gearing,	Extra, "													
DIAMETER OF PORT, CONTINUED		INCHES	16	18	20	22	24	26	28	30	36	40	42	48
Bell End,	Inside Screw		\$90.00	\$112.00	\$143.00	\$164.00	\$205.00			\$360.00	\$562.00		\$841.00	\$1297.
Spigot End,	" "		95.00	118.00	149.00	170.00	212.00							
Spur Gearing,	" " Extra			32.00	38.00	40.00	44.00	44.00		44.00	48.00	54.00	54.00	90.00
Bevel Gearing,	" " "			31.00	35.00	36.00	37.00	37.00		38.00	44.00	51.00	51.00	90.00
Geared Indicator,	"		11.00	11.00	11.00	11.00	11.00	11.00		11.00	11.00	11.00	11.00	11.00
Bell End,	Outside Screw		110.00	136.00	170.00	199.00	238.00							
Weight, Bell End,	Inside Screw, lbs.		845	1110	1400	1640	2150			3750	5400		8425	12725
Weight, Bell End,	Outside Screw, "		950	1250	1565	1880	2320							
Weight, Gearing,	Extra, "			95	135	139	150			220	230		260	525





FIG. 231

WITHOUT INDICATOR

BEVEL-GEARED VALVE WITH GEAR COVER

(SEE LIST NO. 77)

IRON BODY IRON MOUNTED BABBITT SEAT VALVES FOR GAS



FIG. 232

WITH INDICATOR

## IRON BODY BOLT TOP METER GATE VALVES FOR GAS

INSIDE SCREW

BELL OR SPIGOT ENDS BABBITT SEATS AND IRON MOUNTINGS

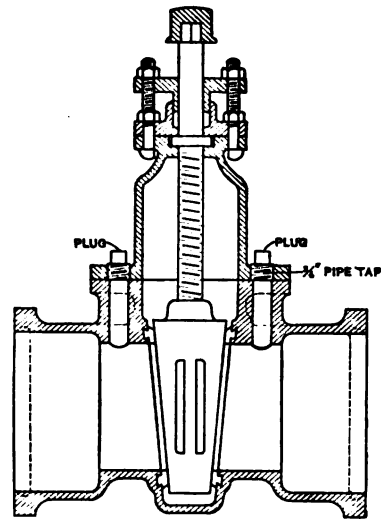
LIST No. 53

These valves are especially designed to facilitate the detection of leaks in the street mains of gas-works systems. They are intended to be placed at intervals in the main, cutting it up into sections. The body is tapped out on each side of the gate or plug for a  $\frac{1}{4}$ -inch pipe which is carried up to the valve box. In testing for leaks, the valves at each end of a section are closed while the main is under pressure and a meter having a pressure gage attached is connected to the  $\frac{1}{4}$  inch pipe of one of the gates. Any leakage in the section will be shown by the reading of the meter or by a gradual drop in pressure if the meter is shut off. These valves are extensively used by the Gas Companies of several of the largest Eastern cities.

The valves are made entirely of iron with the exception of the seats. The seats are of special babbitt metal, particularly fitted to resist the action of gas. The spindles are of wrought iron, tinned above the thrust collar to prevent corrosion. The plugs have finished iron faces.

The stuffing-boxes are of the bolt gland and follower type, packed ready for use. The joints are made without gaskets and the seats and plug faces will not corrode together, so that the valves will always open easily and close tightly.

Unless otherwise ordered, the valves are fitted with 2-inch square nut on the spindle and have grooved bell ends for calked lead joints. If desired, we furnish them with hand wheels on the spindle and with plain ends for cement joint without extra charge. They can also be fitted with indicator or gearing at additional cost, and geared valves may be fitted with Addick's Patent Gear Cover and Lubricator, shown in List 77, thus avoiding the expense of a masonry gate chamber.



SOLID LINES SHOW PLAIN ENDS FOR CEMENT JOINTS  
DOTTED LINES SHOW CALKING BEAM FOR LEAD JOINTS

FIG. 234

INSIDE SCREW

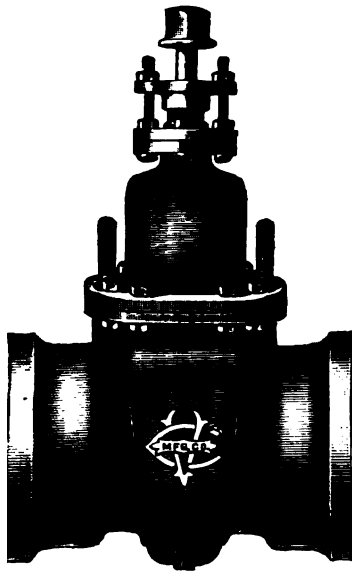


FIG. 233

INSIDE SCREW

CHAPMAN VALVE MANUFACTURING CO.

LIST No. 53

PRICE LIST OF IRON BODY IRON MOUNTED BABBITT SEAT "METER" GATE VALVES FOR GAS

BELL ENDS

DIAMETER OF PORT		INCHES	3	4	5	6	7	8	9	10	12	14	15	16
Bell End,	Inside Screw		\$12.00	\$14.50	\$16.50	\$20.00	\$25.50	\$31.00	\$39.00	\$46.00	\$61.00			
Finished Weight, Bell End,	lbs.		72	102	109	158	204	260	320	405	577			

Larger sizes furnished if desired

## IRON BODY BOLT TOP ANGLE GATE VALVES FOR GAS

LIST NO. 54

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

BABBITT SEATS AND IRON MOUNTINGS

The special feature of these valves is the angle end, which enables them to take the place of an elbow and straight valve with a saving of space and of one joint in the pipe line. They are suitable for use in gas and oil systems, medium and low pressure air lines, etc. The outside screw valves are particularly suitable for inside gas and air work, as the rising spindle forms a perfect indicator. The temperature should not exceed 325 degrees Fahrenheit.

All parts of the valves except the seats and spindles are made of cast iron. The seats are of special babbitt metal and the spindles are of wrought iron, tinned above the thrust collar to prevent corrosion.

Valves 2 inches and smaller have screw tops; larger valves have bolt tops. Inside screw valves 16 inches and smaller have screw packing-nut stuffing-boxes; all other valves have bolt follower boxes. All stuffing-boxes are packed ready for use.

The joints are made without gaskets. The seats and plug faces will not corrode together and the valves will always open easily and close tightly.

We furnish these valves with sliding stem and lever, with indicator or with gearing at an additional cost.

FOR COMPANION FLANGES SEE LIST 71



FIG. 235  
FLANGE END  
INSIDE SCREW



FIG. 236  
FLANGE END  
OUTSIDE SCREW

## CHAPMAN VALVE MANUFACTURING CO.

LIST No. 54

## PRICE LIST OF IRON BODY IRON MOUNTED BABBITT SEAT ANGLE GATE VALVES FOR GAS

SCREW OR FLANGE ENDS

		SCREW TOP							BOLT TOP				
DIAMETER OF PORT	INCHES	$\frac{1}{4}$ & $\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$
Screw End, Inside Screw			\$4.30	\$4.75	\$5.60	\$6.40	\$7.75	\$9.75	\$11.00	\$13.00	\$15.00	\$17.50	\$20.00
Flange End, " "									12.00	14.25	16.50	16.50	18.00
Side Indicator, " " Extra									2.00	2.00	2.10	2.20	2.70
Navy Indicator, " " "													
Sliding Stem and Lever, "			1.20	1.45	1.70	1.85	2.45	3.00	4.00	4.30	5.00	5.35	
Screw End, Outside Screw									14.00	16.50	20.00	24.00	27.50
Flange End, " "									15.00	17.75	21.50	22.50	25.50
Drilling Flanges, "					.35	.12	.12	.12	.16	.16	.16	.16	.16
Weight, Screw End, Inside Screw, lbs.			$4\frac{1}{2}$	7	$8\frac{1}{4}$	12	19	39	57	66	86	98	
Weight, Flange End, " " "									47	63	77	94	106
Weight, Screw End, Outside Screw, "									42	60	76	99	114
Weight, Flange End, " " "									50	68	87	107	121

**CHAPMAN VALVE MANUFACTURING CO.**

**PRICE LIST OF IRON BODY IRON MOUNTED BABBITT SEAT ANGLE GATE VALVES FOR GAS**

**LIST No. 54**  
**CONTINUED**

**SCREW OR FLANGE ENDS**

DIAMETER OF PORT		INCHES	5	6	7	8	9	10	12	14	15	16	18
Screw End,	Inside Screw		\$22.00	\$27.00	\$37.00	\$45.00	\$55.00	\$67.00	\$86.00				
Flange End,	" "		20.00	23.25	29.25	35.25	42.75	52.50	69.50	94.50		\$117.00	
Side Indicator,	" " , Extra		3.00	3.75	4.00	4.70	5.00	5.65	6.90	8.40	\$12.25	13.50	\$16.00
Geared Indicator,	" " , "					11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
Navy Indicator,	" " , "												
Sliding Stem and Lever,	"												
Screw End,	Outside Screw		30.00	36.50	47.00	56.00	69.00	81.00	99.00				
Flange End,	" "		28.25	32.50	39.25	46.25	56.50	66.50	82.50	110.00		137.00	
Drilling Flanges,	Extra		.20	.25	.35	.40	1.10	1.40	2.00	2.50	3.10	3.75	4.35
Weight, Screw End,	Inside Screw, lbs.		106	155	187	264	333	415	579				
Weight, Flange End,	" " "		113	157	195	271	324	411	581	833		1025	
Weight, Screw End,	Outside Screw, lbs.		125	178	209	294	396	475	634				
Weight, Flange End,	" " "		132	180	217	301	387	471	636	907		1131	

## CHAPMAN GAS RETORT OR DIP-PIPE VALVES

SLIDING STEM AND LEVER

FLANGE ENDS

BABBITT SEATS AND IRON MOUNTINGS

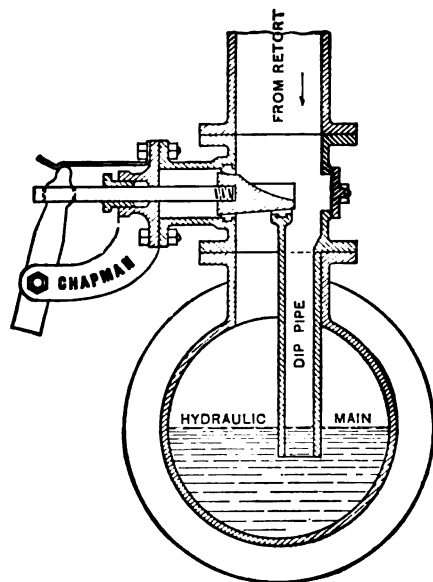


FIG. 237

These valves are specially designed for use in the dip-pipes of gas retorts and are used to shut off the retort from the hydraulic main. They are made to allow the free passage of gas when open and to prevent damage from the accumulation of gas in the retort after the latter has been shut off from the main by the closing of the valve. As shown in the drawing the gate or plug of the valve closes only the half of the opening which corresponds to the gas space above the water in the main. The other half of the opening is occupied by the semi-circular dip-pipe, open at the upper end to the retort and sealed at the lower end by the water in the main against the exit of gas from the main into the retort. Any accumulation of pressure in the retort forces the gas out through the dip-pipe and water into the main without injury to pipes or retort.

The seats are of special babbitt metal unaffected by the action of gas; all other parts of the valve are of iron. The spindles are of wrought iron, tinned to prevent corrosion. The stuffing-boxes have screw glands and are packed ready for use. The joints are made without gaskets. The bottom of the valve has a handhole with removable bolted cover, to allow access for cleaning. The plug is operated by a sliding stem and lever with a spring catch to hold it in place when closed. The length of this lever depends upon the distance from floor to main, and the prices on the opposite page include only a lever of sufficient length for welding, as shown. The dip-pipe may be made of any length desired; our standard length is 14 inches below the face of the lower flange.

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 55

PRICE LIST OF IRON BODY IRON MOUNTED "DIP PIPE" GATE VALVES FOR GAS

DIAMETER OF PORT	INCHES	6	7
Flange End with Sliding Stem		\$35.50	
Drilling Flanges,	Extra	.25	
Finished Weight,	lbs.	175	



**ALL-IRON GATE VALVES FOR HOT GAS, ALKALIES, ETC.**

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

SOLID IRON SEATS

AND IRON MOUNTINGS

200 POUNDS WORKING PRESSURE

This line of valves is made ENTIRELY OF IRON for use with cyanide of potassium, hot gases, extra strong solutions of alkalies and other substances which attack bronze or babbitt metal.

The smaller sizes have screw tops; the larger sizes have bolt tops, put together without gaskets. The stuffing-boxes of valves 4 inches and smaller have screw packing nuts; larger sizes have bolt followers. All boxes are packed ready for use. The spindles are tinned above the thrust collar to prevent corrosion.

The valves are suitable for a working pressure of 200 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of the service.

If desired they can be furnished with sliding stem and lever at an additional cost.

Prices for these valves are the same as the ammonia valves in List 60.,

FOR COMPANION FLANGES SEE LIST 71



FIG. 238

SCREW END—SCREW TOP



FIG. 239

FLANGE END—BOLT TOP

INSIDE OR OUTSIDE SCREW

SCREW OR FLANGE ENDS

SOLID IRON SEATS AND IRON MOUNTINGS

200 POUNDS WORKING PRESSURE



FIG. 240

SCREW END — INSIDE SCREW

This line of valves is made ENTIRELY OF IRON for use with cyanide of potassium, hot gases, extra strong solutions of alkalies and other substances which attack bronze or babbitt metal. The special feature is the angle end, which enables the valve to replace an elbow and straight valve.

Valves 2 inches and smaller have screw tops; larger sizes have bolt tops, put together without gaskets. The stuffing-boxes of inside screw valves, 4 inches and less in size, have screw packing-nuts; all other valves have bolt follower stuffing-boxes. All boxes are packed ready for use.

The spindles are tinned above the thrust collar to prevent corrosion.

The valves are suitable for a working pressure of 200 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of the service.

If desired, they can be furnished with sliding stem and lever at an additional cost.

Prices for these valves are the same as the ammonia valves in List 61.

FOR COMPANION FLANGES SEE LIST 71



FIG. 241

FLANGE END—OUTSIDE SCREW

**SPECIAL C P IRON BODY GATE VALVES FOR GAS, OIL AND AIR****INSIDE OR OUTSIDE SCREW****SCREW, FLANGE OR BELL ENDS****BABBITT SEATS AND IRON MOUNTINGS**

These valves, which are illustrated in the following pages, are made in any size desired and were especially designed for the air piping of modern blast furnace blowing engines. They are particularly adapted for this class of work, being perfectly tight under air pressure FROM EITHER SIDE, working freely and rapidly under all operating conditions and occupying the minimum amount of space. We have recently furnished a number of them to several of the largest blast furnaces in America, to be used under blowing pressures of 25 to 30 pounds. They are equally suitable for gas and oil systems where the temperature does not exceed 325 degrees Fahrenheit.

The valves are designed to occupy as little space as possible. Owing to the construction of the gate or plug and the valve cap we are enabled to make the length face to face much less than our regular valves while preserving in every respect the strength and working qualities. They are made with iron bodies and caps, put together with bolted joint, iron wheels, iron spindles and mountings and special babbitt metal seats; they have inside or outside screw, according to the service. The stuffing-boxes have bolted followers and are packed ready for use. Dimensions will be found in Section X. We furnish them with gearing or chain-wheel, with hydraulic or pneumatic lifting cylinder or arrange them to be operated by electric motor. The inside screw valves can be provided with an INDICATOR to show whether the valve is OPEN or CLOSED. The bodies are plain or ribbed for expansion stresses, as required. We also make these valves with iron seats for hot gas.

We will be pleased to quote prices upon receipt of specifications covering fully the conditions under which the valves are to work.

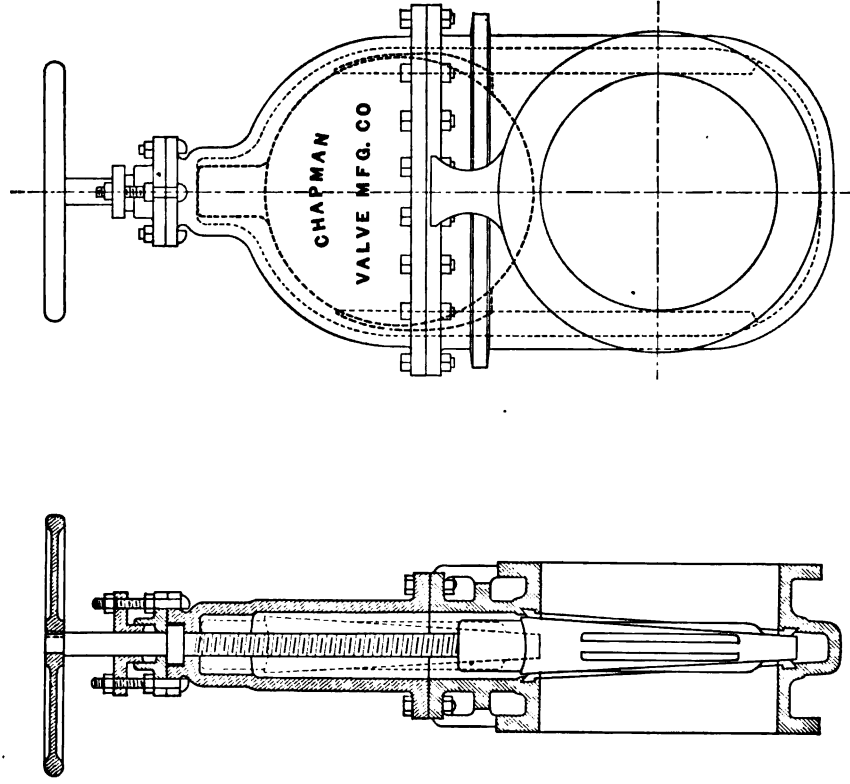


FIG. 242

SECTION

FIG. 243

END ELEVATION

INSIDE SCREW VALVE

**SPECIAL C P VALVE FOR GAS, OIL AND AIR**

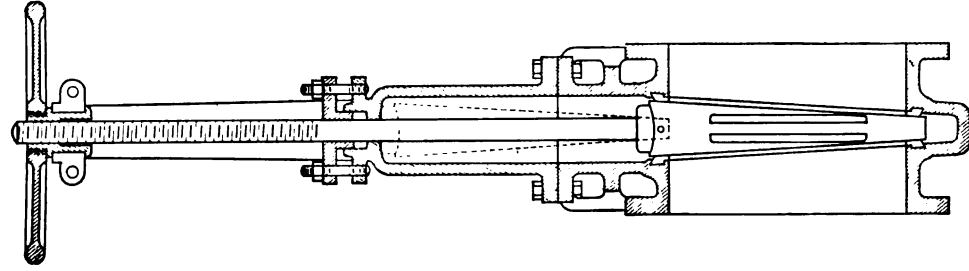


FIG. 244

SECTION

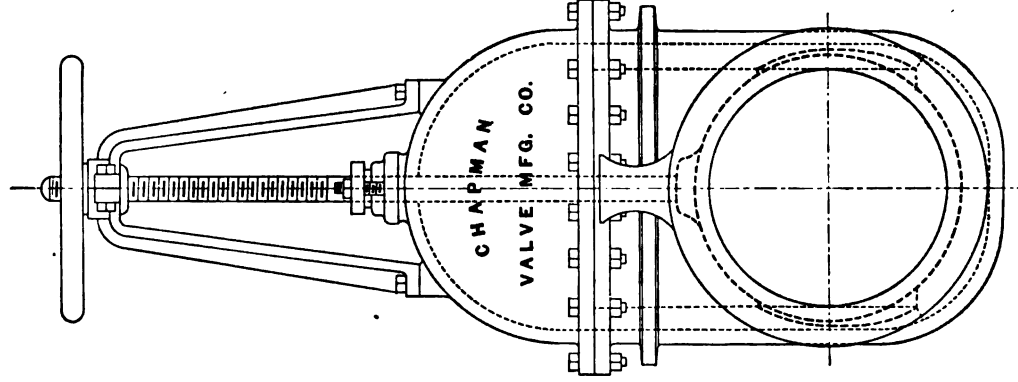


FIG. 245

END ELEVATION

OUTSIDE SCREW VALVE

SPECIAL C P VALVE FOR GAS, OIL AND AIR

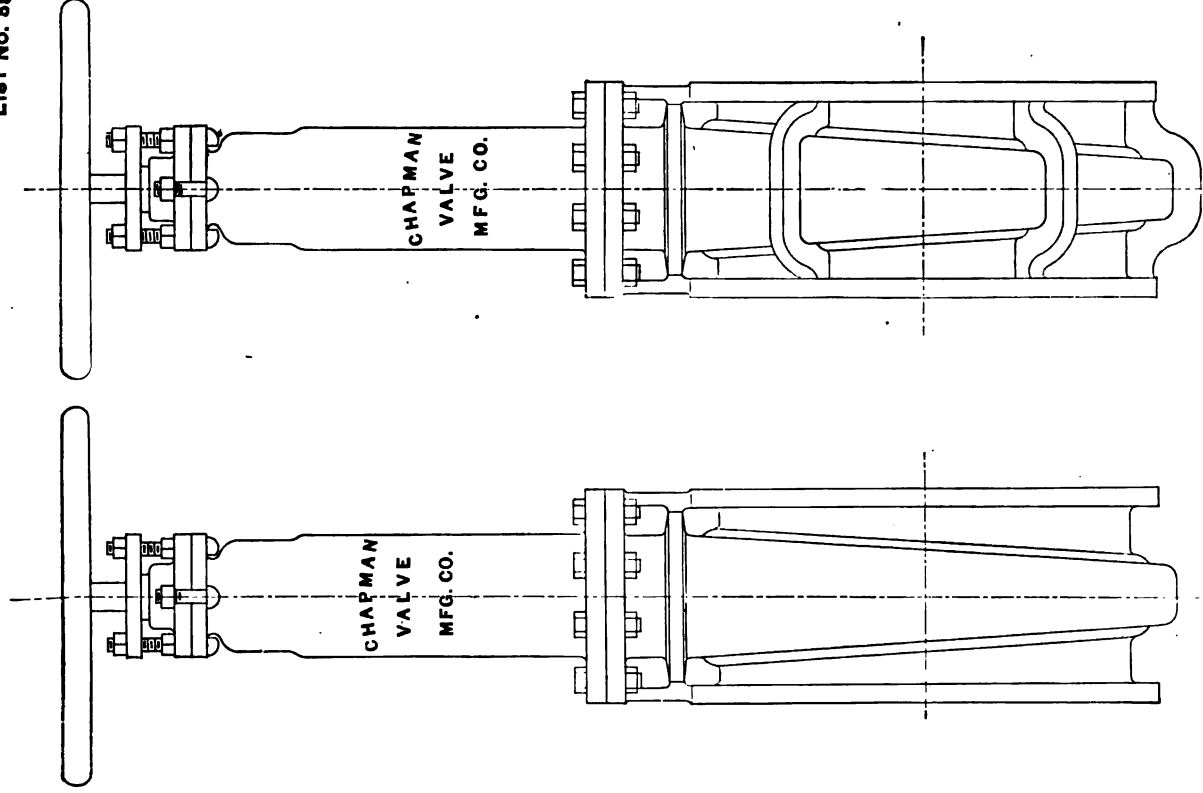


FIG. 246  
WITH PLAIN BODY

FIG. 247  
WITH BODY RIBBED  
FOR EXPANSION STRESSES  
INSIDE SCREW VALVE

**SPECIAL C P VALVE FOR GAS, OIL AND AIR**

## CHAPMAN GATE VALVES, FLANGES AND FLANGE UNIONS FOR AMMONIA ICE-MAKING AND REFRIGERATING PLANTS

---

Our extensive experience in this class of work has enabled us to perfect a complete line of valves, flanges and flange unions which are unequaled in efficiency by any goods on the market.

### GATE VALVES

The valves are of the double-faced gate type, which has been proven by experience to be the most suitable for the purpose. Our valves of this type are equally and perfectly tight against pressure from either side, afford a free and unobstructed passage for the liquid or gas when open, and allow a perfect drainage of the system.

### SEMI-STEEL

The material of which the valves are made is SEMI-STEEL, a special alloy which we have adopted after extensive experiments as being the most satisfactory for the purpose; it is very dense, strong and close-grained.

### SEATS

The valve seats are made of a special babbitt metal alloy which we have proved by extensive tests to be unaffected by the action of ammonia. The combination of these seats with the semi-steel faces of the valve plug or gate ensures entire freedom from corrosion and the valves will always open easily and close tightly.

### SPINDLES

The spindles are of the best quality of wrought iron or steel and are made of large size and ample strength.

### STUFFING- BOXES

The stuffing-boxes are of large size and are provided with driving-gland in the smaller sizes and with bolted follower in the larger sizes. They are packed with special sectional ammonia packing, ready for use, before leaving the works.

### INSIDE SCREW OR NON-RISING SPINDLES

These valves are made exclusively with inside screw. This enables the stuffing-box joint around the spindle to be kept tight without difficulty, as the packing is undisturbed by the operation of the spindle.

**PRESSURES**

These valves are made in two weights, the first suitable for a working pressure of 100 pounds or less and the second suitable for a working pressure of 300 pounds.

**STRAIGHT AND  
ANGLE VALVES**

They are made in both straight and angle patterns and with screw, flange or special ends. The angle valves are tight against pressure from either side and require less space than an elbow and straight valve; the angle end is of good radius and affords an easy turn.

**FLANGES AND  
FLANGE UNIONS**

Our regular lines of flanges and flange unions are listed in Lists 71, 72 and 73, and will be found to meet all requirements. They are of the best material and are made with the greatest care and accuracy.

**TESTING**

All valves, flanges and unions are tested under heavy air pressure to detect leaks in the joints or through the metal. Their tightness in all parts is ensured before shipment.



## INSIDE SCREW

## SCREW OR FLANGE ENDS

## BABBITT METAL SEATS

## 100 POUNDS WORKING PRESSURE

These valves are especially designed for holding anhydrous ammonia and other refrigerating liquids and gases. They are suitable for use on the low pressure pipes of refrigerating plants of both compression and absorption systems.

They are designed for a working pressure of 100 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of the service.

The bodies, caps and plugs are made of SEMI-STEEL, a very dense, fine-grained metal particularly suited to the purpose; the seats are of a special babbitt metal which resists the action of ammonia; the spindles are of wrought iron or soft steel; and the wheels are of cast iron, japanned.

Valves 2 inches and less in size have screw tops; larger valves have bolt tops. The stuffing-boxes of valves 4 inches and smaller have screw packing-nuts; larger sizes have bolt follower stuffing-boxes.

All stuffing-boxes are packed with special sectional ammonia packing, ready for use.

The body and cap flanges of bolt top valves are put together with a thin lead gasket and are heavily bolted.

The greatest care and accuracy is exercised in their construction and every valve is tested under air pressure, while both open and closed, to ensure tightness under all working conditions.

FOR COMPANION FLANGES SEE LIST 71



FIG. 250  
SCREW END—SCREW TOP



FIG. 251  
8SCREW END—BOLT TOP

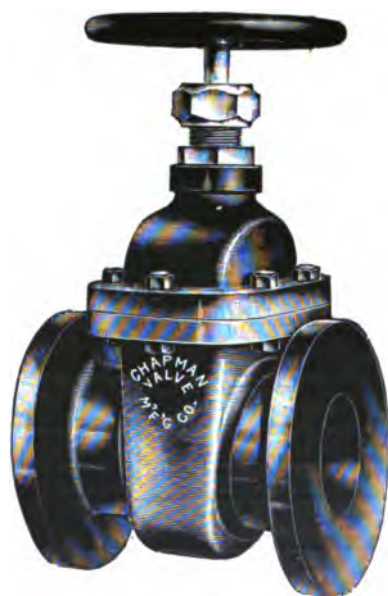


FIG. 252  
FLANGE END—BOLT TOP

SEMI-STEEL BABBITT SEAT GATE VALVES FOR AMMONIA

**CHAPMAN VALVE MANUFACTURING CO.**

**FORMER TABLE NO. 5**

**LIST NO. 60**

**PRICE LIST OF SEMI-STEEL BABBITT SEAT GATE VALVES FOR AMMONIA**

**SCREW OR FLANGE ENDS**

		SCREW TOP								BOLT TOP	
DIAMETER OF PORT	INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{4}$	3
Screw End		\$3.00	\$3.00	\$3.25	\$3.65	\$4.35	\$5.00	\$6.10	\$7.85	\$11.10	\$15.50
Flange End		3.40	3.40	3.70	4.20	5.00	5.75	7.00	8.85	11.70	15.85
Drilling End Flanges,	Extra					.35	.12	.12	.12	.16	.16
Weight, Screw End,	lbs.	$1\frac{1}{2}$	$1\frac{1}{2}$	$2\frac{1}{2}$	$3\frac{1}{4}$	6	$7\frac{1}{4}$	10	16	32	42
Weight, Flange End,	"	$2\frac{1}{4}$	$2\frac{1}{4}$	4	$5\frac{1}{4}$	$8\frac{1}{4}$	11	15	23	43	51
		BOLT TOP									
DIAMETER OF PORT, CONTINUED	INCHES	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	8	9	10	12
Screw End		\$18.60	\$21.50	\$26.50	\$31.25	\$40.00	\$48.00	\$58.00			
Flange End		19.50	22.25	26.75	31.25	40.00	47.00	56.00			
Drilling End Flanges,	Extra	.16	.16	.16	.20	.25	.35	.40	1.10	1.40	2.00
Weight, Screw End,	lbs.	59	75	105	127	185	239	287			
Weight, Flange End,	"	74	85	118	141	197	247	296			

## SEMI-STEEL ANGLE GATE VALVES FOR AMMONIA

LIST NO. 61

INSIDE SCREW

SCREW OR FLANGE ENDS

BABBITT METAL SEATS

100 POUNDS WORKING PRESSURE

These valves are especially suitable for use in this class of work, as they are tight against pressure from either side.

They are made expressly for holding anhydrous ammonia and other refrigerating liquids and gases and are extensively used on the low pressure pipes of both compression and absorption ammonia refrigerating systems. They are suitable for a working pressure of 100 pounds per square inch and are amply strong for the service.

The bodies, caps and wheels are of SEMI-STEEL, a very dense and fine-grained metal particularly suited to the purpose. The seats are of special babbitt metal, unaffected by ammonia; the spindles are of wrought iron or soft steel; and the wheels are of cast iron, japanned.

Valves 2 inches and smaller have screw tops; the larger valves have bolt tops. The stuffing-boxes of valves 4 inches and smaller have screw packing-nuts; larger valves have bolt follower stuffing-boxes. All boxes are packed with special sectional ammonia packing, ready for use.

The body and cap flanges of bolt top valves are put together with thin lead gasket and are heavily bolted.

Every valve is tested under air pressure, both open and closed, to ensure tightness under all working conditions.

FOR COMPANION FLANGES, SEE LIST 71



FIG. 253  
BOLT TOP  
SCREW END

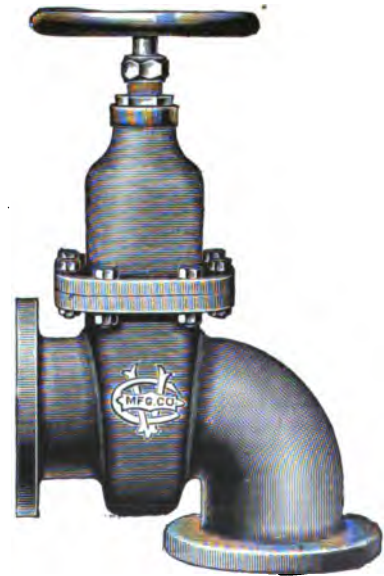


FIG. 254  
BOLT TOP  
FLANGE END

CHAPMAN VALVE MANUFACTURING CO.

**PRICE LIST OF SEMI-STEEL BABBITT SEAT ANGLE GATE VALVES FOR AMMONIA**  
SCREW OR FLANGE ENDS

LIST No. 61

		SCREW TOP								BOLT TOP	
DIAMETER OF PORT	INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Screw End				\$4.30	\$4.75	\$5.60	\$6.40	\$7.75	\$9.75	\$14.00	\$19.25
Flange End											
Drilling End Flanges,	Extra					.35	.12	.12	.12	.16	.16
Weight, Screw End,	lbs.				4 $\frac{1}{2}$	7	8 $\frac{1}{4}$	12	19	37	52
Weight, Flange End,	"										
		BOLT TOP									
DIAMETER OF PORT, CONTINUED	INCHES	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	8	9	10	12
Screw End											
Flange End											
Drilling End Flanges,	Extra	.16	.16	.16	.20	.25	.35	.40	1.10	1.40	2.00
Weight, Screw End,	lbs.										
Weight, Flange End,	"										
Prices for sizes not listed quoted upon application											

INSIDE SCREW

SCREW OR FLANGE ENDS

BABBITT METAL SEATS

300 POUNDS WORKING PRESSURE.

These valves are made from extra heavy patterns, especially designed for holding anhydrous ammonia and other refrigerating liquids and gases; also for gas and oil under heavy pressures. They are extensively used on the ammonia pipes of refrigerating plants of both compression and absorption systems. They are designed for a working pressure of 300 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of the service.

The bodies, caps and plugs are made of SEMI-STEEL, a very dense close grained metal particularly suited to the purpose; the seats are of a special babbitt metal which resists the action of ammonia and gas; the spindles are of wrought iron or soft steel, and the wheels are of cast iron, japanned. Valves 2 inches and less in size have screw tops and driving gland stuffing-boxes; the larger valves have bolt tops and bolt-follower stuffing-boxes. All boxes are packed with special sectional ammonia packing, ready for use. Especial attention is called to the cap and stuffing-box joints shown in the cuts. These joints are made by a ring of special babbitt metal confined in a groove in the cap or gland, which screws down on a finished tongue on the body or cap. This makes a perfect joint in every respect. The body and cap joint of bolt top valves is made with thin lead gasket and is heavily bolted.

The greatest care and accuracy is exercised in the construction of these valves and every valve is tested under heavy air pressure both open and closed to ensure tightness under all working conditions.

We list the valves with screw ends and with plain or tongued flange ends; but can furnish them with ends of any style desired.

FOR COMPANION FLANGES SEE LIST 72

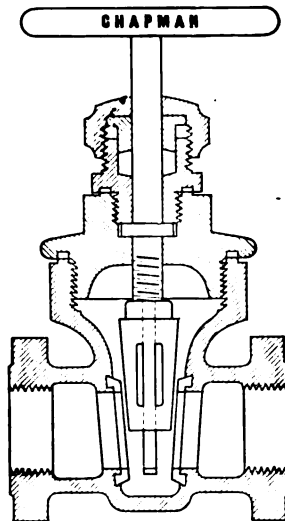


FIG. 255

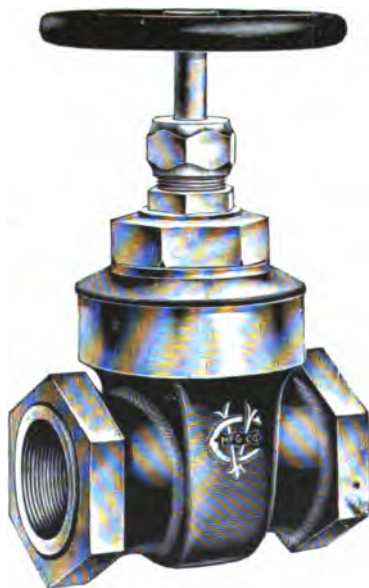


FIG. 256

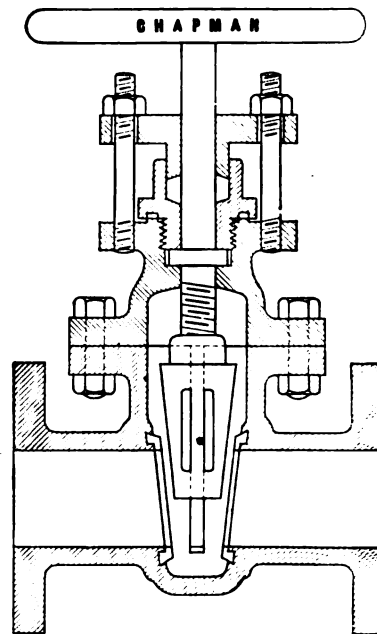


FIG. 257

SCREW END—SCREW TOP  
FLANGE END—BOLT TOP  
**EXTRA HEAVY SEMI-STEEL BABBITT SEAT GATE VALVES FOR AMMONIA**

CHAPMAN VALVE MANUFACTURING CO.

PRICE LIST OF EXTRA HEAVY SEMI-STEEL BABBITT SEAT GATE VALVES FOR AMMONIA

LIST No. 62

SCREW OR FLANGE ENDS

		SCREW TOP								BOLT TOP	
DIAMETER OF PORT	INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Screw End		\$5.50	\$5.50	\$5.75	\$6.20	\$7.50	\$8.75	\$10.25	\$12.75	\$16.00	\$21.50
Flange End, Plain Flanges		5.80	5.80	6.10	6.80	8.20	9.50	11.50	14.50	16.75	22.50
Flange End, Tongued Flanges						8.60	10.00	12.00	15.00	18.00	24.00
Drilling End Flanges,	Extra					.20	.20	.20	.20	.35	.35
Weight, Screw End,	lbs.	3	3	6	9	14	16	22	33	56	82
Weight, Flange End,	"	4 $\frac{1}{2}$	4 $\frac{1}{2}$	6	13	15	21	28	38	67	98
		BOLT TOP									
DIAMETER OF PORT, CONTINUED	INCHES	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	8	9	10	12
Screw End		\$25.50	\$30.00	\$36.50	\$47.00	\$56.25	\$72.00	\$83.00			
Flange End, Plain Flanges		27.50	31.00	37.25	48.00	58.00	73.00	85.00		\$119.00	\$163.00
Flange End, Tongued Flanges		29.00	32.75	39.00	50.00	59.50	75.00	87.00		122.00	166.00
Drilling End Flanges,	Extra	.40	.55	.80	1.00	1.50	1.75	1.75	2.10	2.50	3.50
Weight, Screw End,	lbs.	92	120	161	225	276	395	450			
Weight, Flange End,	"	115	139	183	255	310	429	477		750	1100



INSIDE SCREW

GLAND ENDS

BABBITT METAL SEATS

300 POUNDS WORKING PRESSURE

These valves are made from extra heavy patterns, especially designed for holding anhydrous ammonia and other refrigerating liquids and gases. They are extensively used on the ammonia pipes of refrigerating plants of both compression and absorption systems. They are designed for a working pressure of 300 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of the service.

The special feature of these valves is the gland ends, the arrangement of which is clearly shown in the cut. The pipe is screwed into the ends of the valve as usual and as an additional precaution against leakage, the ends are packed with moulded rubber rings held in place by the glands. Tin washers are placed between the rubber and the glands. The rings and washers are not furnished with the valves. Screw glands as shown are used on valves 3 inches and smaller; larger valves have 2-bolt oval followers.

All parts of the valves except the seats, spindles and wheels are of SEMI-STEEL, a very dense, fine-grained metal particularly suited to the purpose. The seats are of a special babbitt metal, unaffected by ammonia; the spindles are of wrought iron or soft steel; the wheels are of cast iron, japanned. Valves 2 inches and smaller have screw tops and driving gland stuffing-boxes; other valves have bolt tops and bolt follower boxes. All stuffing-boxes are packed with special sectional ammonia packing, ready for use.

Especial attention is called to the cap and stuffing-box joints shown in the cut. These joints are made by a ring of special babbitt metal confined in a groove in the cap or gland, which screws down on a finished tongue on the face of the body or cap. This makes a perfect joint in every respect. The body and cap joints of bolt top valves are made with thin lead gaskets and are heavily bolted.

The greatest care and accuracy is exercised in the construction of these valves and every valve is subjected to a heavy air test, both open and closed, to ensure its tightness under all working conditions.

We are prepared to furnish them with gland ends of any other style desired.

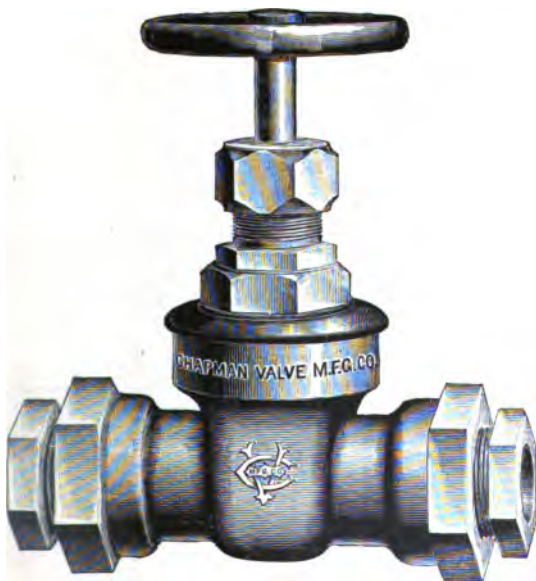


FIG. 258

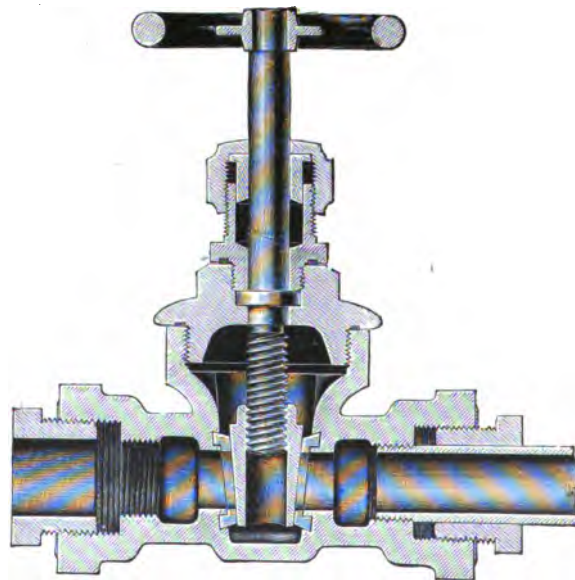


FIG. 259  
SECTIONAL

**EXTRA HEAVY SEMI-STEEL GLAND END VALVES FOR AMMONIA**

CHAPMAN VALVE MANUFACTURING CO.

LIST No. 63

PRICE LIST OF EXTRA HEAVY SEMI-STEEL BABBITT SEAT GATE VALVES FOR AMMONIA

GLAND ENDS

DIAMETER OF PORT		INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Price,	each		\$6.50	\$6.50	\$6.80	\$7.40	\$8.90	\$10.50	\$12.50	\$15.50	\$20.50	\$26.00
Weight,	" , lbs.		4 $\frac{3}{8}$	4 $\frac{3}{8}$	8 $\frac{1}{2}$	9 $\frac{1}{4}$	18	22	28	42	69	95

**EXTRA HEAVY SEMI-STEEL ANGLE GATE VALVES FOR AMMONIA****INSIDE SCREW****SCREW, FLANGE OR SPECIAL ENDS****BABBITT METAL SEATS****300 POUNDS WORKING PRESSURE****FIG. 260****SCREW END**

These angle valves are especially suitable for use in heavy pressure lines of refrigerating plants, as they are tight against pressure from either side. They are made from extra heavy patterns, especially designed for ammonia work. They are suitable for a working pressure of 300 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of the service. The angle ends are of good radius. The bodies, caps and plugs are made of SEMI-STEEL, a very dense fine-grained metal particularly suited to the purpose; the seats are of a special babbitt metal unaffected by ammonia; the spindles are of wrought iron or soft steel; the wheels are of cast iron, japanned. Valves 2 inches and smaller have screw tops and driving gland stuffing-boxes; larger valves have bolt tops and bolt follower boxes. All boxes are packed with special sectional ammonia packing, ready for use. Especial attention is called to the cap and stuffing-box joints shown in the cut. These joints are made by a ring of special babbitt metal confined in a groove in the cap or gland, which screws down on a finished tongue on the face of the body or cap. This makes a perfect joint in every respect. The body and cap joints of bolt top valves are made with thin lead gaskets and are heavily bolted. The greatest care and accuracy is exercised in the construction of these valves and every valve is tested under heavy air pressure, both open and closed, to ensure tightness under all working conditions.

We list these valves with screw ends and with plain or tongued flange ends, but can furnish them with ends of any other style desired.

**FOR COMPANION FLANGES SEE LIST 72**

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 64

PRICE LIST OF EXTRA HEAVY SEMI-STEEL BABBITT SEAT ANGLE GATE VALVES FOR AMMONIA

SCREW OR FLANGE ENDS

		SCREW TOP								BOLT TOP	
DIAMETER OF PORT	INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Screw End					\$7.35	\$8.75	\$10.00	\$12.00	\$15.00		
Flange End, Plain Flanges											
Flange End, Tongued Flanges											
Drilling End Flanges, Extra						.20	.20	.20	.20	.35	.35
Weight, Screw End, lbs.				$6\frac{1}{2}$	10	16	19	26	38		
Weight, Flange End, "									42		
		BOLT TOP									
DIAMETER OF PORT, CONTINUED	INCHES	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	8	9	10	12
Screw End											
Flange End, Plain Flanges											
Flange End, Tongued Flanges											
Drilling End Flanges, Extra		.40	.55	.80	1.00	1.50	1.75	1.75	2.10	2.50	3.50
Weight, Screw End, lbs.											
Weight, Flange End, "		129			287	359					
Prices for sizes not listed quoted upon application											

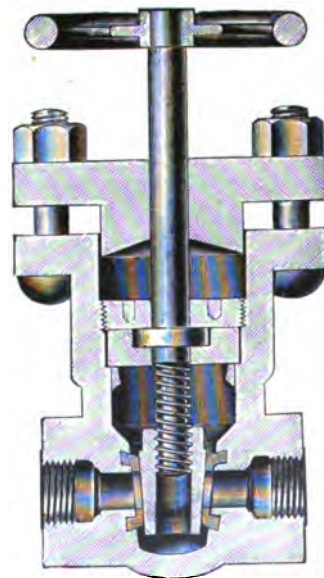
**RANKIN EXTRA HEAVY SEMI-STEEL GATE VALVES FOR AMMONIA****SCREW OR FLANGE ENDS****INSIDE SCREW****BABBITT METAL SEATS****300 POUNDS WORKING PRESSURE****FIG. 261**

These valves are suitable for use on the ammonia piping of refrigerating plants of both compression and absorption systems and are made from extra heavy patterns, especially designed for holding anhydrous ammonia and other refrigerating liquids and gases. Their special feature is the **ABSENCE OF ANY JOINT IN THE BODY**, thus confining the possibility of leakage entirely to the stuffing-box. The plug is entered through the stuffing-box and a screwed disk in the bottom of the box holds the thrust collar of the spindle in place. The stuffing-box has a bolt follower and is packed with a moulded rubber ring not furnished with the valve.

The valves are designed for a working pressure of 300 pounds per square inch and have a factor of safety amply large to cover the ordinary stresses of the service.

All parts of the valves, except the seats, spindles and wheels are made of **SEMI-STEEL**, a very dense close-grained metal particularly suited to the purpose; the seats are of special babbitt metal unaffected by ammonia; the spindles are of wrought iron or soft steel; the wheels are of cast iron, japanned. The stuffing-boxes are not packed.

We also furnish these valves with gland ends of any style desired.

**FIG. 262****SECTIONAL**

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 18

LIST NO. 65

PRICE LIST OF RANKIN EXTRA HEAVY SEMI-STEEL GATE VALVES FOR AMMONIA

SCREW ENDS

DIAMETER OF PORT		INCHES	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$
Screw End			\$5.15	\$6.15	\$6.80	\$8.25	\$10.00	\$12.60	\$20.00
Weight,		lbs.	11	16	19	26	33	45	66

**EXTRA HEAVY SEMI-STEEL AMMONIA GAGE-CLASS VALVES****SCREW ENDS****INSIDE SCREW OR SLIDING STEM AND LEVER****300 POUNDS WORKING PRESSURE****BABBITT METAL SEATS**

These valves are designed to meet the requirement for an ammonia gage-glass valve which shall be perfectly tight under all conditions. The apparatus consists of two  $\frac{1}{4}$ -inch extra heavy semi-steel angle gate valves, with packing box and nut for the gage-glass on the straight end and with or without guard rods, as desired. The valves are of extra heavy design and are made of SEMI-STEEL, a very dense, close-grained metal. They have iron spindles and special babbitt metal seats. The stuffing-boxes for spindle and gage-glasses are large in size and are provided with driving-glands; they are packed ready for use. The angle ends are threaded for connection to the receiver by means of  $\frac{1}{4}$ -inch extra heavy nipples, as shown in the central figure on the next page.

The valves are tested under heavy air pressure, both open and closed, and their tightness under all working conditions is ensured before shipment. Both valves and guard rods are neatly japanned to prevent rusting.

We also furnish these valves with sliding stems and levers, arranged for quick closing by means of a wire rope or rod in case of breakage of the glass.

LIST No. 66

**PRICE LIST OF EXTRA HEAVY AMMONIA GAGE-CLASS VALVES**

Price per Pair—without Guard Rods—No Glass	\$15.85
“ “ “ —with “ “ — “ “	16.60
“ “ “ —with Guard Rods and Levers—No Glass	22.00
Weight per Pair—with Rods	
“ “ “ —with Rods and Levers	



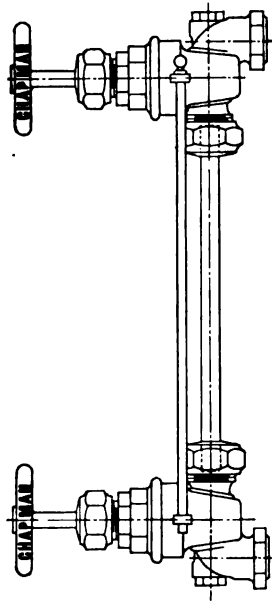


FIG. 263  
WITH GUARD RODS

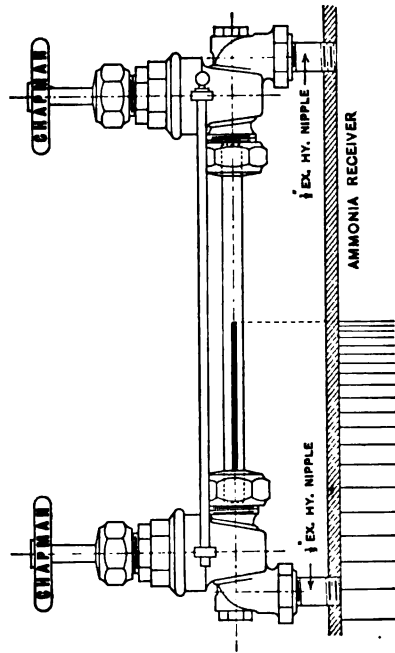


FIG. 264  
CONNECTED TO RECEIVER  
EXTRA HEAVY SEMI-STEEL AMMONIA CAGE-GLASS VALVES

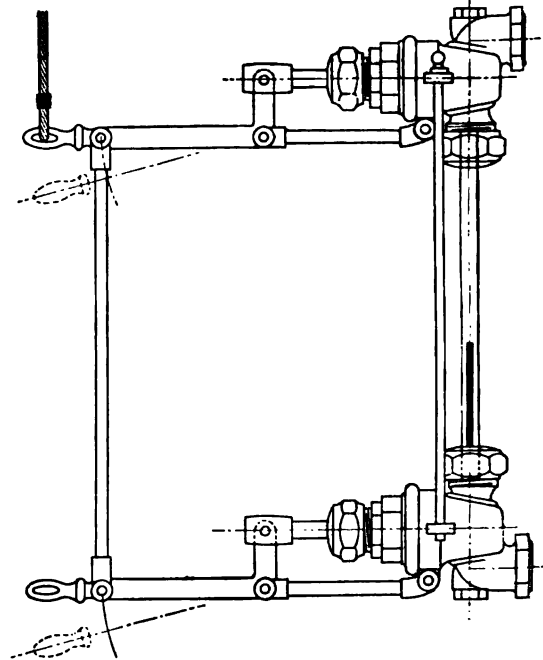


FIG. 265  
WITH LEVERS FOR QUICK CLOSING



SECTION V.

THREADED COMPANION FLANGES

TO MATCH

REGULAR CHAPMAN VALVES



# HEAVY ROUND CAST IRON FLANGES AND FLANGE UNIONS FOR WATER, STEAM AND OIL

TO MATCH VALVES IN LISTS 21, 23, 24, 26, 27, 28, 29, 31, 41, 42 AND 48

200 POUNDS WORKING WATER PRESSURE



FIG. 275  
FLANGE

125 POUNDS WORKING STEAM PRESSURE



FIG. 276  
FLANGE UNION

These flanges are designed to suit the regular Chapman valves for water, steam and oil. They are made of cast iron with plain faces and are threaded according to AMERICAN or BRIGGS' STANDARD for wrought iron pipe.

The superiority of these flanges lies in the accuracy with which the threading, facing and drilling is done. The flanges are bored out tapering and the threads are chased on the exact taper of the pipe which they are to receive, thus ensuring a perfect fit for the entire length of the thread.

The faces of the flanges are then turned to a perfectly smooth surface, requiring only a very thin gasket to make a perfect joint. The bolt holes are drilled to a steel-bushed templet. We furnish these flanges as companion flanges for valves, loose for use with flanged fittings, or in pairs for use as flange unions. They are of the best material and workmanship and are suitable for use on pipe lines carrying 125 to 200 pounds working pressure.

## PRICE LIST OF HEAVY ROUND CAST IRON SCREWED FLANGES AND FLANGE UNIONS FOR WATER AND STEAM

TO MATCH VALVES IN LISTS 21, 23, 24, 26, 27, 28, 29, 31, 41, 42 AND 45

SIZE OF PIPE	INCHES	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$
Faced and Threaded, —Each Flange		\$0.40	\$0.40	\$0.40	\$0.55	\$0.60	\$0.90	\$1.00	\$1.20	\$1.40	\$1.60
Faced, Threaded and Drilled, — “ “		.45	.45	.45	.60	.65	.95	1.05	1.25	1.45	1.65
Bolts per Set (for one joint)		.10	.10	.10	.15	.25	.25	.25	.25	.35	.65
Flange Union with Bolts—no Gasket, —Each Union		1.05	1.10	1.15	1.45	1.60	2.20	2.45	2.95	3.35	4.10
Weight, —Each Flange		2	2	$2\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{2}$	5	6	10	11	12
SIZE OF PIPE, CONTINUED	INCHES	5	6	7	8	9	10	12	14	15	16
Faced and Threaded, —Each Flange		\$1.75	\$2.10	\$2.60	\$3.05	\$3.95	\$4.70	\$6.40	\$7.55	\$8.75	
Faced, Threaded and Drilled, — “ “		1.80	2.20	2.70	3.20	4.50	5.25	7.00	8.50	10.00	
Bolts per Set (for one joint)		.65	.65	.65	.70	1.05	1.45	1.50	2.15	3.00	
Flange Union with Bolts—no Gasket, —Each Union		4.40	5.20	6.15	7.20	10.20	12.20	15.85	19.50	23.50	
Weight, —Each Flange		15	16	21	28	29	36	56	70	90	

**HEAVY ROUND CAST IRON FLANGES AND FLANGE UNIONS FOR WATER, STEAM AND OIL**

TO MATCH VALVES IN LISTS 21, 23, 24, 25, 27, 28, 29, 31, 41, 42 AND 45

200 POUNDS WORKING WATER PRESSURE

FIG. 275  
FLANGE

125 POUNDS WORKING STEAM PRESSURE

FIG. 276  
FLANGE UNION

These flanges are designed to suit the regular Chapman valves for water, steam and oil. They are made of cast iron with plain faces and are threaded according to AMERICAN or BRIGGS' STANDARD for wrought iron pipe.

The superiority of these flanges lies in the accuracy with which the threading, facing and drilling is done. The flanges are bored out tapering and the threads are chased on the exact taper of the pipe which they are to receive, thus ensuring a perfect fit for the entire length of the thread.

The faces of the flanges are then turned to a perfectly smooth surface, requiring only a very thin gasket to make a perfect joint. The bolt holes are drilled to a steel-bushed templet. We furnish these flanges as companion flanges for valves, loose for use with flanged fittings, or in pairs for use as flange unions. They are of the best material and workmanship and are suitable for use on pipe lines carrying 125 to 200 pounds working pressure.

## PRICE LIST OF HEAVY ROUND CAST IRON SCREWED FLANGES AND FLANGE UNIONS FOR WATER AND STEAM

TO MATCH VALVES IN LISTS 21, 23, 24, 26, 27, 28, 29, 31, 41, 42 AND 45

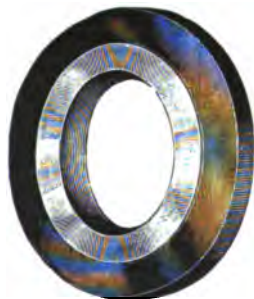
SIZE OF PIPE		INCHES	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$
Faced and Threaded,	—Each Flange		\$0.40	\$0.40	\$0.40	\$0.55	\$0.60	\$0.90	\$1.00	\$1.20	\$1.40	\$1.60
Faced, Threaded and Drilled,	— “ “		.45	.45	.45	.60	.65	.95	1.05	1.25	1.45	1.65
Bolts per Set (for one joint)			.10	.10	.10	.15	.25	.25	.25	.25	.35	.65
Flange Union with Bolts—no Gasket,	—Each Union		1.05	1.10	1.15	1.45	1.60	2.20	2.45	2.95	3.35	4.10
Weight,	—Each Flange		2	2	$2\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{2}$	5	6	10	11	12
SIZE OF PIPE, CONTINUED		INCHES	5	6	7	8	9	10	12	14	15	16
Faced and Threaded,	—Each Flange		\$1.75	\$2.10	\$2.60	\$3.05	\$3.95	\$4.70	\$6.40	\$7.55	\$8.75	
Faced, Threaded and Drilled,	— “ “		1.80	2.20	2.70	3.20	4.50	5.25	7.00	8.50	10.00	
Bolts per Set (for one joint)			.65	.65	.65	.70	1.05	1.45	1.50	2.15	3.00	
Flange Union with Bolts—no Gasket,	—Each Union		4.40	5.20	6.15	7.20	10.20	12.20	15.85	19.50	23.50	
Weight,	—Each Flange		15	16	21	28	29	36	56	70	90	

**TO MATCH VALVES IN LISTS 52 AND 53**

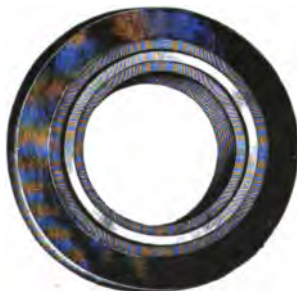
**4 IN. AND LESS--600 POUNDS WORKING PRESSURE**

**6 IN. TO 9 IN.--450 POUNDS WORKING PRESSURE**

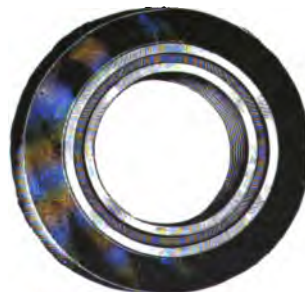
**10 IN. TO 16 IN.--350 POUNDS WORKING PRESSURE**



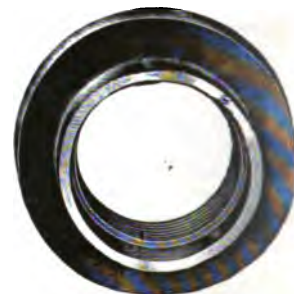
**FIG. 277**  
**PLAIN-FACED FLANGE**



**FIG. 278**  
**TONGUED FLANGE**



**FIG. 279**  
**GROOVED FLANGE**



**FIG. 280**  
**FLANGE WITH CALKING SEAM**

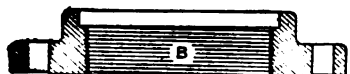
**TO MATCH VALVES IN LISTS 43, 44 AND 45**

**250 POUNDS WORKING STEAM PRESSURE**



PLAIN FLANGE WITHOUT CALKING SEAM.

FIG. 281



PLAIN FLANGE WITH CALKING SEAM.

FIG. 282



TONGUED FLANGE WITHOUT CALKING SEAM.

FIG. 283



GROOVED FLANGE WITHOUT CALKING SEAM.

FIG. 284



TONGUED FLANGE WITH CALKING SEAM.

FIG. 285

These flanges are designed to suit the Chapman extra heavy valves for water, steam and oil. They are made of cast iron and with plain faces, tongued or grooved faces; and with or without calking recess, as shown in the cuts. They are threaded according to American or Briggs' standard for wrought iron pipe.

The superiority of these flanges lies in the accuracy with which the threading, facing and drilling are done. The flanges are bored out tapering and the threads are chased on the exact taper of the pipe they are to receive, thus ensuring a perfect contact for the entire length of thread. The faces are then turned to a perfectly smooth surface, requiring only a very thin gasket to make an absolutely tight joint. The bolt-holes are drilled to a steel-bushed templet.

We furnish these flanges as companion flanges for valves, loose for use with flanged fittings, or in pairs for use as flange unions.

They are of the best material and workmanship and are suitable for the working pressures given on the opposite page.

The only difference between the flanges in Lists 69 and 70 is that they are made to suit different valves.



GROOVED FLANGE WITH CALKING SEAM.

FIG. 286



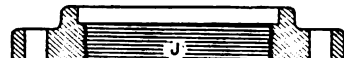
MALE REBATED FLANGE WITHOUT CALKING SEAM.

FIG. 287



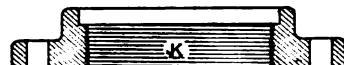
FEMALE REBATED FLANGE WITHOUT CALKING SEAM.

FIG. 288



MALE REBATED FLANGE WITH CALKING SEAM.

FIG. 289



FEMALE REBATED FLANGE WITH CALKING SEAM.

FIG. 290



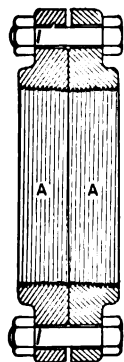


FIG. 291

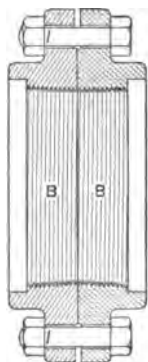


FIG. 292

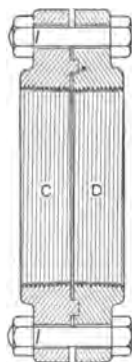


FIG. 293



FIG. 297

# EXTRA CAST IRON ROUND FLANGES AND FLANGE UNIONS

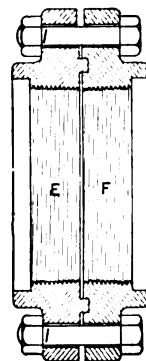


FIG. 294

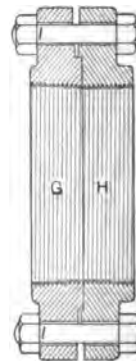


FIG. 295

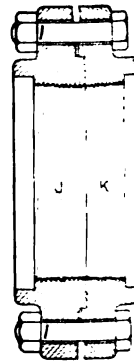


FIG. 296

**CHAPMAN VALVE MANUFACTURING CO.**

**PRICE LIST OF EXTRA HEAVY ROUND CAST IRON SCREWED FLANGES AND FLANGE UNIONS FOR WATER LIST No. 69**

TO MATCH VALVES IN LISTS 32 AND 33

**PRICE LIST OF EXTRA HEAVY ROUND CAST IRON SCREWED FLANGES AND FLANGE UNIONS FOR STEAM AND WATER LIST No. 70**

TO MATCH VALVES IN LISTS 43, 44 AND 46

FLANGE	SIZE OF PIPE	INCHES	$\frac{3}{4}$	1	$1\frac{1}{2}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$
A	Faced and Threaded,	—Each Flange	\$0.45	\$0.45	\$0.55	\$0.70	\$0.75	\$1.15	\$1.65	\$1.85	\$2.20	\$2.45
B	" " "	" " "	.55	.55	.65	.80	.90	1.40	1.90	2.05	2.45	2.80
Cor D	" " "	" " "	.60	.60	.70	.85	.95	1.40	2.00	2.10	2.50	2.80
E or F	" " "	" " "	.70	.70	.80	1.00	1.10	1.60	2.05	2.30	2.75	3.10
A	Faced, Threaded and Drilled,	— " "	.55	.55	.60	.75	.85	1.30	1.80	2.00	2.40	2.75
B	" " "	" " "	.65	.65	.70	.90	.95	1.55	2.05	2.20	2.65	3.05
Cor D	" " "	" " "	.70	.70	.75	.95	1.00	1.55	2.15	2.25	2.70	3.05
E or F	" " "	" " "	.80	.80	.85	1.10	1.20	1.75	2.20	2.45	2.95	3.40
Bolts per Set (for one joint)			.15	.15	.15	.25	.30	.35	.50	.60	.75	.75
A	Flange Union with Bolts, no Gasket	—Each Union	1.35	1.35	1.45	1.85	2.05	3.00	4.25	4.75	5.65	6.35
B	" " " " " "	" " "	1.55	1.55	1.65	2.15	2.35	3.50	4.70	5.15	6.15	6.95
C & D	" " " " " "	" " "	1.65	1.65	1.85	2.25	2.50	3.65	5.10	5.70	6.75	7.25
E & F	" " " " " "	" " "	1.85	1.85	2.05	2.55	2.80	4.05	5.75	6.10	7.30	8.05
A	Weight,	—Each Flange, lbs.	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$	9	16	17	21	22
B	"	" " "	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$	10	16	18	22	23
Cor D	"	" " "	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	5 $\frac{1}{2}$	6	9	16	17	22	24
E or F	"	" " "	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	5 $\frac{1}{2}$	7	10	17	17	22	26

Rabbeted Flanges G & H and J & K same price as Tongued and Grooved Flanges C & D and E & F  
Prices are the same for Lists 69 and 70; the only difference is that the flanges are made to match different valves

**CHAPMAN VALVE MANUFACTURING CO.**

**PRICE LIST OF EXTRA HEAVY ROUND CAST IRON SCREWED FLANGES AND FLANGE UNIONS FOR WATER** **LIST No. 66**  
CONTINUED

**TO MATCH VALVES IN LISTS 62 AND 63**

**PRICE LIST OF EXTRA HEAVY ROUND CAST IRON SCREWED FLANGES AND FLANGE UNIONS FOR STEAM AND WATER** **LIST No. 70**  
CONTINUED

FLANGE	SIZE OF PIPE	INCHES	5	6	7	8	9	10	12	14	15	16
A	Threaded and Faced,	—Each Flange	\$2.90	\$3.90	\$4.55	\$5.00	\$5.75	\$7.30	\$9.55	\$12.00	\$12.90	
B	" " "	— " "	3.15	4.35	5.05	5.70	6.60	8.10	10.15	13.60	14.50	
Cor D	" " "	— " "	3.25	4.25	4.95	5.50	6.35	7.70	10.20	13.40	13.90	
E or F	" " "	— " "	3.50	4.70	5.50	6.30	7.05	8.40	10.80	14.60	15.60	
A	Threaded, Faced and Drilled,	— " "	3.25	4.65	5.40	5.85	6.85	8.60	11.30	14.20	15.40	
B	" " "	— " "	3.50	5.10	5.90	6.55	7.65	9.40	12.00	15.65	17.00	
Cor D	" " "	— " "	3.65	5.05	5.80	6.35	7.45	8.95	12.00	15.45	16.40	
E or F	" " "	— " "	3.95	5.50	6.40	7.20	8.10	9.65	12.60	16.70	18.20	
Bolts per Set (for one Flange)			.80	1.25	1.60	1.60	1.70	2.10	2.60	3.60	3.80	
A	Flange Union with Bolts—no Gasket	—Each Union	7.50	10.75	12.60	13.50	15.60	19.50	25.50	32.40	35.00	
B	" " " " " "	— " "	8.00	11.65	13.60	14.90	17.20	21.00	26.90	35.25	38.25	
C & D	" " " " " "	— " "	8.60	12.00	14.00	15.35	17.50	21.00	28.00	36.00	38.75	
E & F	" " " " " "	— " "	9.15	12.75	15.00	17.00	19.35	22.65	29.00	38.00	41.25	
A	Weight.	—Each Flange, lbs.	26	28	42	47	53	64	88	117	125	
B	"	— " "	28	31	47	53	59	70	94	132	140	
Cor D	"	— " "	27	29	43	48	55	67	91	123	131	
E or F	"	— " "	29	32	47	55	61	74	100	138	148	

Rabbeted Flanges G & H and J & K same price as Tongued and Grooved Flanges C & D and E & F  
Prices are the same for Lists 66 and 70; the only difference is that the flanges are made to match different valves

**SEMI-STEEL COMPANION FLANGES AND FLANGE UNIONS FOR AMMONIA, GAS, OIL, ETC.**

TO MATCH VALVES IN LISTS 51, 54, 55, 57, 60 AND 61

100 POUNDS WORKING AMMONIA PRESSURE



FIG. 298

FLANGE

These flanges are made of semi-steel with plain faces and are threaded according to AMERICAN or BRIGGS' standard for wrought iron pipe.

Their superiority lies in the accuracy with which the threading, facing and drilling are done. The flanges are bored out tapering and the threads are chased on the exact taper of the pipe they are to receive, thus insuring a perfect joint for the entire length of the thread. The faces of the flanges are then turned to a perfectly smooth surface, requiring only a very thin gasket to make an absolutely tight joint. The bolt holes are drilled to a steel-bushed template.

We furnish these flanges as companion flanges for valves; loose, for use with flanged fittings; or in pairs, for use as flange unions. The unions are provided with lead gaskets and tested under air pressure. These flanges are of the best material and workmanship, and are suitable for ammonia lines carrying 100 pounds pressure.



FIG. 299

FLANGE UNION

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 71

PRICE LIST OF SEMI-STEEL ROUND FLANGES AND UNIONS FOR AMMONIA AND GAS

TO MATCH VALVES IN LISTS 51, 54, 56, 57, 60 AND 61

SIZE OF PIPE	INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3
Faced and Threaded,	—Each Flange				\$0.55	\$0.55	\$0.60	\$0.75	\$0.85	\$1.15	\$1.20
Faced, Threaded and Drilled,	— " "				.60	.60	.65	.80	.90	1.20	1.25
Bolts per Set (for one joint)					.10	.10	.10	.15	.15	.15	.20
Union with Bolts and Lead Gasket,	—Each Union				1.25	1.25	1.35	1.70	1.85	2.50	2.65
Weight,	—Each Flange, lbs.				2	2	2 $\frac{1}{4}$	3 $\frac{1}{4}$	3 $\frac{1}{2}$	5	5
SIZE OF PIPE	INCHES	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5	6	7	8	9	10	12
Faced and Threaded,	—Each Flange	\$1.55	\$1.75	\$2.05	\$2.15	\$2.60	\$2.95	\$3.50	\$4.75	\$5.60	\$6.80
Faced, Threaded and Drilled,	— " "	1.60	1.85	2.10	2.25	2.70	3.05	3.60	5.30	6.15	7.40
Bolts per Set (for one joint)		.30	.30	.35	.35	.35	.50	.50	.75	.85	1.05
Union with Bolts and Lead Gasket,	—Each Union	3.45	3.90	4.50	4.85	5.75	6.60	7.75	11.35	13.25	16.00
Weight,	—Each Flange, lbs.	10	11	12	15	16	19	25	29	36	46

**EXTRA HEAVY SEMI-STEEL ROUND FLANGES AND FLANGE UNIONS FOR AMMONIA, GAS AND AIR****300 POUNDS WORKING PRESSURE****TO MATCH VALVES IN LISTS 62 AND 64**

---

These flanges are designed to suit the Chapman extra heavy semi-steel ammonia valves and are of extra strong design, especially suitable for use in high pressure ammonia piping. They are of SEMI-STEEL, a very dense, close-grained metal particularly suited to the purpose, and are made with plain faces, tongued or grooved faces and with or without the calking recess on the back, as shown by the drawings.

Flanges without calking recess (A, C and E) have the back of the boss finished to permit of tinning for making a solder joint as an extra precaution against leakage and corrosion. The B, D and F flanges are provided with a calking recess on the back of the boss, which is intended to be filled with lead and calked after the flange is made on to the pipe, also as an extra protection against corrosion and leakage.

The threads are cut according to the American or Briggs' standard for wrought iron pipe.

The superiority of these flanges lies in the material and in the accuracy with which the threading, facing and drilling are done. The flanges are bored out tapering and the threads are chased to the exact taper of the pipe they are to receive, thus ensuring a perfect joint for the entire length of the thread. The faces are then turned to a perfectly smooth surface, requiring only a very thin gasket to make an absolutely tight joint. The bolt-holes are drilled to a steel-bushed templet.

We furnish these flanges as companion flanges for valves, loose for use with flanged fittings, or in pairs for use as flange unions. The flange unions are provided with lead gaskets.

Every flange and union is tested under heavy air pressure and its tightness is ensured before it leaves the works.

These flanges and unions are of the best material and workmanship and are suitable for pipe lines carrying 300 pounds working pressure.



PLAIN FLANGE WITHOUT CALKING SEAM.

FIG. 300



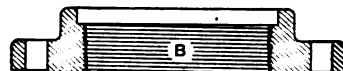
TONGUED FLANGE WITHOUT CALKING SEAM.

FIG. 302



TONGUED FLANGE WITH CALKING SEAM.

FIG. 304



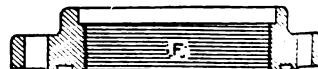
PLAIN FLANGE WITH CALKING SEAM.

FIG. 301



GROOVED FLANGE WITHOUT CALKING SEAM.

FIG. 303



GROOVED FLANGE WITH CALKING SEAM.

FIG. 305

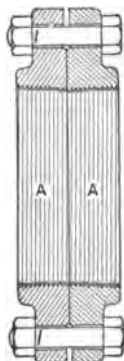


FIG. 306

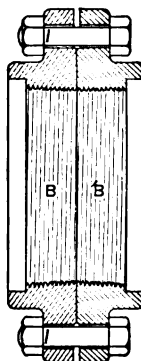


FIG. 307

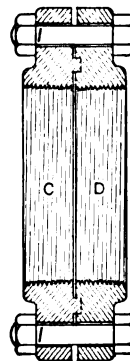


FIG. 308

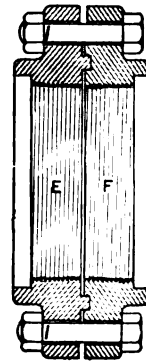


FIG. 309

EXTRA HEAVY SEMI-STEEL ROUND FLANGES AND FLANGE UNIONS FOR AMMONIA AND HIGH PRESSURE GAS

**CHAPMAN VALVE MANUFACTURING CO.**

**PRICE LIST OF EXTRA HEAVY ROUND SEMI-STEEL SOREWED FLANGES AND FLANGE UNIONS FOR AMMONIA**  
**TO MATCH VALVES IN LISTS 62 AND 64**

**LIST NO. 72**

SIZE OF PIPE		INCHES	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3
A	Faced and Threaded	— Each Flange				\$0.60	\$0.60	\$0.75	\$0.90	\$1.05	\$1.40	\$2.05
B	“ “ “	— “ “				.70	.70	.80	1.05	1.20	1.65	2.25
Cor D	“ “ “	— “ “				.75	.75	.85	1.10	1.25	1.70	2.30
E or F	“ “ “	— “ “				.85	.85	.95	1.20	1.35	1.95	2.40
A	Faced, Threaded and Drilled	— “ “				.70	.70	.80	1.00	1.15	1.55	2.20
B	“ , “ “ “	— “ “				.80	.80	.90	1.10	1.25	1.80	2.40
Cor D	“ , “ “ “	— “ “				.85	.85	.95	1.15	1.30	1.85	2.50
E or F	“ , “ “ “	— “ “				.95	.95	1.00	1.30	1.45	2.05	2.70
Bolts per Set (for one joint)						.15	.15	.15	.25	.30	.35	.50
A	Flange Union with Bolts and Lead Gasket—Each Union					1.60	1.60	1.80	2.25	2.60	3.60	5.10
B	“ “ “ “ “ “ “ — “ “					1.75	1.75	1.95	2.45	2.80	4.05	5.45
& D	“ “ “ “ “ “ “ — “ “					1.75	2.05	2.20	2.70	3.40	4.50	6.10
& F	“ “ “ “ “ “ “ — “ “					1.90	2.20	2.40	2.90	3.70	4.70	6.40
A	Weight, — Each Flange, lbs.					2 $\frac{1}{4}$	2 $\frac{1}{2}$	3 $\frac{1}{4}$	5 $\frac{1}{4}$	6 $\frac{1}{4}$	9	16
B	“ , — “ “ “ “					2 $\frac{1}{4}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{3}{4}$	10	16
or D	“ , — “ “ “ “					2 $\frac{1}{4}$	2 $\frac{1}{2}$	3 $\frac{1}{4}$	5 $\frac{1}{4}$	6	9	16
or F	“ , — “ “ “ “					2 $\frac{1}{2}$	2 $\frac{3}{4}$	3 $\frac{1}{2}$	5 $\frac{1}{2}$	7	10	17



CHAPMAN VALVE MANUFACTURING CO.

PRICE LIST OF EXTRA HEAVY ROUND SEMI-STEEL FLANGES AND UNIONS FOR AMMONIA

TO MATCH VALVES IN LISTS 82 AND 84

LIST NO. 72  
CONTINUED

SIZE OF PIPE		INCHES	3½	4	4½	5	6	7	8	9	10	12
A	Faced and Threaded	— Each Flange	\$2.25	\$2.85	\$3.00	\$3.50	\$4.70	\$5.45	\$5.90			
B	" " "	— " "	2.40	3.10	3.40	3.75	5.25	6.05	6.75			
Cor D	" " "	— " "	2.50	3.15	3.50	3.85	5.25	5.90	6.60			
E or F	" " "	— " "	2.70	3.45	3.80	4.30	5.85	6.55	7.35			
A	Faced, Threaded and Drilled	— " "	2.40	3.00	3.25	3.90	5.45	6.30	6.75			
B	" , " " "	— " "	2.60	3.25	3.65	4.15	6.00	6.90	7.55			
Cor D	" , " " "	— " "	2.65	3.35	3.75	4.25	6.05	6.75	7.45			
E or F	" , " " "	— " "	2.90	3.65	4.10	4.70	6.60	7.35	8.20			
Bolts per Set (for one joint)			.60	.75	.75	.80	1.25	1.60	1.60	1.70	2.10	2.60
A	Flange Union with Bolts and Lead Gasket—Each Union		5.65	6.85	7.50	8.80	12.50	14.60	15.70			
B	" " " " " " " " — " "		6.00	7.40	8.20	9.40	13.60	15.80	17.30			
C & D	" " " " " " " " — " "		6.65	8.15	9.15	10.65	15.20	17.45	19.10			
E & F	" " " " " " " " — " "		7.00	8.50	9.60	11.25	15.90	18.20	20.20			
A	Weight,	— Each Flange, lbs.	17	21	22	26	28	42	47	53	64	88
B	" ,	— " " "	18	22	23	28	31	47	53	59	70	94
Cor D	" ,	— " " "	17	22	24	27	29	43	48	55	67	91
E or F	" ,	— " " "	17	22	26	29	32	47	55	61	74	100

300 POUNDS WORKING PRESSURE

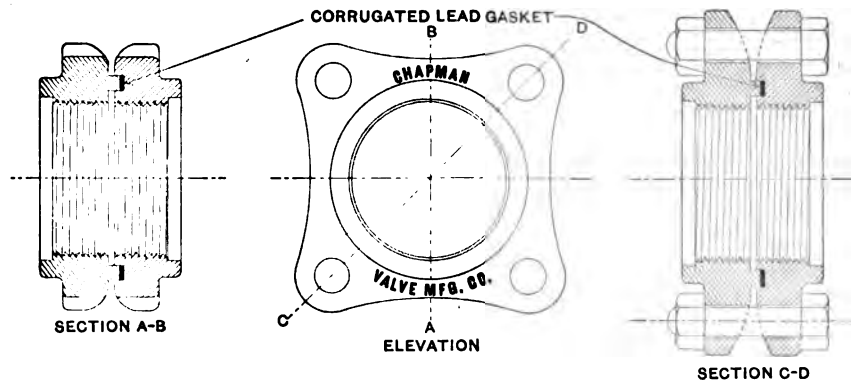


FIG. 310

These flange unions are of extra strong pattern, especially designed for high pressure ammonia piping, and are made of SEMI-STEEL, a very dense, close-grained metal particularly suited to the purpose.

They are made with tongued and grooved joint and are provided with corrugated lead gaskets. The bolts are four to six in number and are of large diameter. The threads are cut according to the American or Briggs' standard for wrought iron pipe.

The boss on the back of these flanges is extended and provided with a recess deep enough to cover the exposed portion of the thread on the pipe. After the flange is made on to the pipe this recess is filled with asphaltum paint and the exposed pipe thread is thus effectually protected against corrosion. The superiority of these unions lies in the material and in the accuracy with which the threading and facing are done. The flanges are bored out tapering and the threads are chased on the the exact taper of the pipe they are to receive, thus ensuring a perfect joint for the entire length of the thread. The faces are then finished to a perfectly smooth surface, requiring only a very thin gasket to make an absolutely tight joint.

Every flange or union is tested under a heavy air pressure and its tightness is ensured before it leaves the works.

These unions are of the best material and workmanship and are suitable for pipe lines carrying 300 pounds pressure.

CHAPMAN VALVE MANUFACTURING CO.

LIST No. 73

PRICE LIST OF EXTRA HEAVY SEMI-STEEL SQUARE FLANGE UNIONS FOR AMMONIA

SIZE OF PIPE		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6
Price per Flange		\$0.50	\$0.50	\$0.55	\$0.60	\$0.80	\$0.80	\$0.90	\$1.20	\$1.55	\$1.90		\$2.35		\$3.50	\$4.15
Price per Union		1.05	1.05	1.20	1.30	1.65	1.75	2.00	2.55	3.35	4.20		5.20		7.60	9.00
Weight per Flange,	lbs.	$\frac{3}{4}$	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{4}$	3	4	$6\frac{1}{2}$	$8\frac{1}{2}$		12		18	21
Weight per Union,	"	$2\frac{1}{4}$	$2\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{3}{4}$	$4\frac{1}{2}$	$5\frac{1}{4}$	7	$8\frac{3}{4}$	14	$18\frac{1}{2}$		25		39	44



SECTION VI.

INDICATOR ATTACHMENTS — INDICATOR POSTS —

FLOOR STANDS — GEARING — GEAR COVERS —

LIFTING CYLINDERS, ETC.

FOR

REGULAR CHAPMAN VALVES



Reference has been made in the preceding pages to the several types of indicators for our inside screw valves. These are shown in the accompanying cuts.

The Chapman NAVY INDICATOR, Fig. 325, is applicable to both bronze and iron valves of all kinds up to and including 18 inches in size. Its operation is shown by the cut; the pointer, driven by a thread on the spindle, rises and falls with the plug and registers on a scale at the side of the slot the true position of the plug. The scale is marked to show the number of inches the plug has moved and has the words OPEN and SHUT at top and bottom. This indicator can be set to be read from any point and is a neat, strong and durable device. It is used extensively by the United States Navy.

The Chapman SIDE INDICATOR, Fig. 326, is applicable to any of our bronze and iron bolt top valves from 2½ to 24 inches in size and is suitable for use wherever an indicator is desired. This indicator has no parts which can be disarranged or tampered with and is especially adapted to fire protection valves used in connection with automatic or non-automatic sprinkler systems in mills, factories and public buildings. It is recommended by the Fire Underwriters for this purpose. A metal slide, driven by a thread on the spindle, rises and falls with the plug and by exposing the words OPEN and SHUT (in polished bronze on a black background) at a window in a plate fastened to the valve cap, shows plainly whether the valve is open or closed. Unless otherwise specified, this indicator is made to be read from the end of the valve, as shown in the cut; if so ordered, it can be made to be read from the side of the valve, at right angles to the position shown.

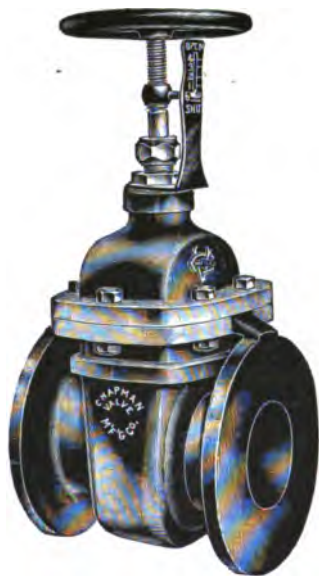
The Chapman GEARED INDICATOR, Fig. 327, is applicable to both plain and geared bolt top valves and is especially adapted for geared or plain valves 8 inches and larger in size, as it is made to be read from the operating plane. Its operation is as follows: A worm on the operating spindle of the valve revolves a worm wheel and shaft supported by a bracket from the valve cap or yoke. A pointer, driven by a thread on this shaft, travels along the shaft in unison with the plug and by its position relative to the words OPEN and SHUT on a plate or scale above the shaft indicates the

position of the plug. The working parts of the indicator are protected by a hollow box, which affords no lodging place for obstructions. We recommend this indicator for underground valves of all kinds, as it is heavy and strong and is not liable to injury from falling earth or gravel. It is extensively used for valves in the street mains of water and gas works and for large valves in power and generating plants.

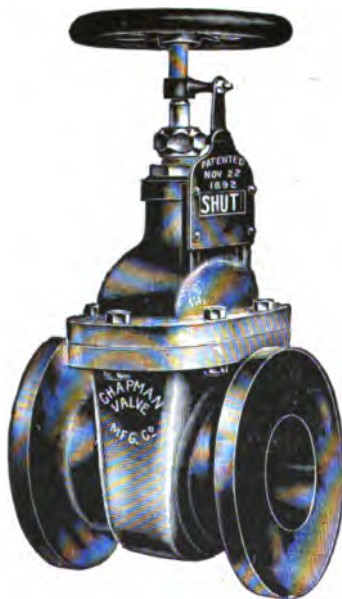
All Chapman indicators are made to allow free access to the valve stuffing-box and valves equipped with indicators require slightly greater height from center of port or spindle to top of wheel or operating nut.

The parts of either of the above indicators can be furnished to be attached to valves already in use.

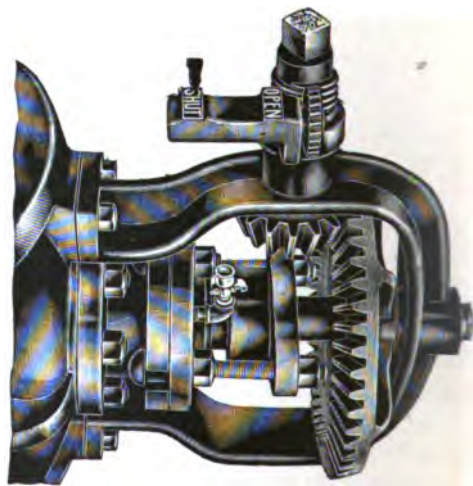
The Chapman outside screw valves have rising spindles, which form the best possible indicators, requiring no intermediate mechanism; the distance that the spindle projects through the wheel shows the number of inches the plug has moved. For use on fire protection systems these outside screw valves are preferred above valves with indicators and are specified by the Inspection Departments of Fire Insurance Companies.



**FIG. 325**  
**NAVY INDICATOR**



**FIG. 326**  
**SIDE INDICATOR**



**FIG. 327**  
**GEARED INDICATOR**

**INDICATORS FOR CHAPMAN VALVES**

**INDICATOR POST FOR FIRE PROTECTION VALVES**

This post shows plainly whether the valve is Open or Closed, and is intended to be used with fire protection valves in street mains, factory and mill yards, grounds of public buildings, etc. It is specified by the Fire Underwriters for this purpose and prevents all delay and mistakes in finding and operating the valve.

It consists of a cast iron post of handsome design about 3 feet high, connected with the valve by a cast iron pipe or casing and provided with a nut and extension rod for operating the valve from the top of the post.

An indicator or tell-tale driven by a thread on the spindle rises and falls with the gate or plug and by exposing the words Open and Shut at the top of the post, shows at a glance whether the valve is open or closed. The letters are of large size, in black on a white ground, and are very distinct and durable. The name of the system controlled by the valve may be stencilled upon the post. In cities the post may be set at the curb-line like a hydrant. This post can be used with any size or make of valve and we furnish it complete with valve or separate for use with existing valves.

The size and shape of the operating or rod nut is made to conform to the standard of the system in which the valves are to be used.

In ordering, give size and kind of valve, distance from ground to bottom of pipe, number of turns to open and whether valve turns to Right or Left to open.

Price for Post with Case and Extension Rod for 5 feet from ground to bottom of pipe . . . . .	\$62.00
Extra for each foot of Case and Rod . . . . .	1.55



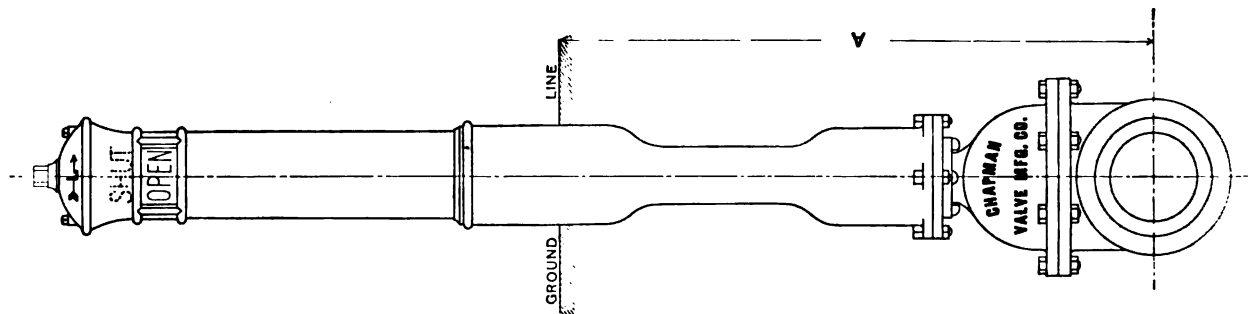


FIG. 330

**INDICATOR POST FOR FIRE PROTECTION VALVES**

## CHAPMAN FLOOR STANDS

---

We make three standard types of floor stands, viz.: Stationary spindle stand, Fig. 331; stationary spindle indicator stand, Fig. 332, and rising spindle stand, Fig. 333.

The stationary spindle stands, both plain and indicator, are suitable for use with both inside screw and outside screw and yoke valves; the rising spindle stands are intended to take the place of the yoke on outside screw valves or to be used to operate sluice gates.

All stands are of the same general outline and are handsome and substantial; they are made of different sizes to suit the various sizes of valves.

The spindles are accurately fitted to the stands and wheels, so that they are held firmly and revolve truly. The bottom flanges are drilled for bolts.

The indicator stand has a positive and reliable indicating device similar to the Chapman Navy Indicator and registers on a scale the true position of the plug, as shown in the cut.

The rising spindle stand is made with stationary wheel and the spindle is operated by a revolving nut held in the top of the stand and turned by the hand wheel. The spindle rises without revolving and its projection through the wheel allows it to be inspected and oiled and forms a positive and accurate indicator.

The list prices include in each case a hand wheel of proper size for the valve and a steel spindle of corresponding size extending to the floor line. Owing to the variety of conditions we are unable to list the connection between the floor line and the valve, but will be pleased to quote upon complete valve, floor stand and connection upon receipt of data. We list these stands in two styles of finish, viz.: Painted stand, fitted with black enameled hand wheel, and stand finished all over and fitted with hand wheel having finished rim and enameled web.

For further information concerning floor stands, and illustrations of their application, together with instructions for ordering, see the following pages.



FIG. 331  
STATIONARY SPINDLE STAND



FIG. 332  
INDICATOR STAND



FIG. 333  
RISING SPINDLE STAND

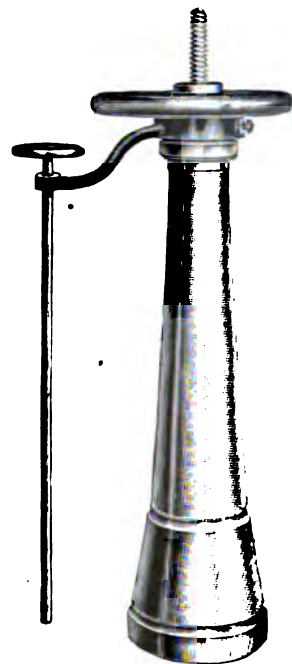


FIG. 334  
FINISHED RISING SP. STAND  
WITH BY-PASS ARM

**CHAPMAN FLOOR STANDS**

## PRICE LIST OF FLOOR STANDS, NOT CONNECTED TO VALVES\*

## STATIONARY SPINDLE STANDS WITH SPINDLE AND WHEEL

DESIGNATION OF STAND	A		B			
SIZE OF VALVE	2½ in. & less	3 in. to 4½ in.	5 in. to 8 in.	9 in. to 14 in.	15 in. to 18 in.	20 in. & above
Stat'y Spindle Stand without Indicator—Painted	\$9.00	\$9.75	\$13.00	\$15.00	\$18.00	\$23.00
“ “ “ “ —Finished†	30.00	35.00	46.00	52.00	60.00	
Stat'y Spindle Stand with Indicator —Painted	16.00	17.00	22.75	25.00	28.00	34.00
“ “ “ “ —Finished†	37.00	42.00	56.00	62.00	70.00	
Finished Weight—without Indicator lbs.	40	63	106	136	171	243

## RISING SPINDLE STANDS WITH SPINDLE AND WHEEL

DESIGNATION OF STAND	C		E			F		
SIZE OF VALVE	3½ in. & less	4 in. & 4½ in.	5 in. to 7 in.	8 in. to 10 in.	12 in. & 14 in.	15 in. & 16 in.	18 in.	20 in. & above
Rising Spindle Stand—Painted	\$17.00	\$19.00	\$23.00	\$26.00	\$29.00	\$43.00	\$50.00	\$56.00
“ “ “ —Finished†	45.00	47.50	57.00	60.00	65.00	85.00		
Finished Weight lbs.	80	85	105	115	135	175	225	275

\*Prices on Stands connected to Valves quoted upon application

†Stand finished all over and wheel rim polished

## FLOOR STANDS AND THEIR APPLICATION

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In many cases it is desirable to operate a valve from a point at some distance above or below it. In such cases a floor stand is commonly placed at the operating level and connection is made with the valve by means of an extended spindle alone or by some special arrangement, depending upon conditions.

### INSIDE SCREW VALVE WITH PLAIN OR INDICATOR STAND

The Stationary Spindle Stand, either plain or indicator, is the only type of stand to be used with an inside screw valve. Our method of attaching the extension rod of the stand to the valve spindle, when we furnish valve and stand complete, is by means of a coupling with four pins, two in the rod and two in the spindle, as shown in Fig. 335.

### VALVE WITH RISING SPINDLE STAND

An arrangement frequently used, especially for engine throttles, injection valves for condensers, etc., consists of a valve fitted with a Rising Spindle Stand, such as is shown in Fig. 336. For such cases this arrangement is especially adapted, being perfectly firm and rigid and unaffected by changes in the alignment of the pipe. The rising spindle also forms an accurate indicator. A cast iron extension, cut away at the bottom to allow access to the stuffing-box, makes the connection between the valve and the stand. When the distance A between the center of port and the floor line is short this extension is cast on to the stand; otherwise it is cast separately and bolted to the valve and stand. A coupling is used to connect the extension rod to the valve spindle, if required.

### OUTSIDE SCREW AND YOKE VALVE WITH STATIONARY SPINDLE STAND

The Stationary Spindle Stand, either plain or indicator, may be applied to an outside screw and yoke valve by the arrangement shown in Fig. 337. In this case the valve wheel (shown in dotted lines) is removed and a socket nut of sufficient depth to allow the valve spindle to rise to its full height, is substituted. No other change is made in the valve. The upper end of the socket nut is fastened to the extension rod of the floor stand and revolves with it, the valve spindle rising inside the nut. A slot in the side of the nut allows the spindle to be inspected and oiled.

#### **VALVES WITH BY-PASS AND FLOOR STAND**

Figs. 339 and 340 show a valve with an outside screw by-pass valve, both operated from the floor above. The main valve has a cast iron extension and rising spindle floor stand and the by-pass valve is operated by a socket nut, the extension rod and wheel of the by-pass being carried by an arm projecting from the stand.

Fig. 338 shows a similar arrangement for an inside screw valve with inside screw by-pass valve. In some cases two stands of different sizes are used, the larger for the main valve and the smaller for the by-pass valve.

#### **INVERTED VALVE WITH FLOOR STAND**

Fig. 341 shows an inverted valve with floor stand, arranged to be operated from the floor below.

#### **GEARED VALVES WITH FLOOR STAND**

Fig. 343 shows a bevel geared valve with by-pass, both main and by-pass valves operated by stationary spindle stands. The spindle of the by-pass is turned at right angles to the main spindle, thus requiring no gearing. A similar arrangement may be used for outside screw valves, and the floor stands may be plain or indicator.

#### **IN GENERAL**

In some cases, the distance A is so short that the valve cap projects above the floor line; for such cases we make a floor stand with extra large base, bolted directly to the valve cap, as in Fig. 342.

Fig. 344 shows a floor stand with bevel gearing, arranged for operating very large valves or sluice-gates.

Various other arrangements will suggest themselves to meet special conditions; we shall be pleased to make suggestions and prices upon receipt of data covering the conditions.

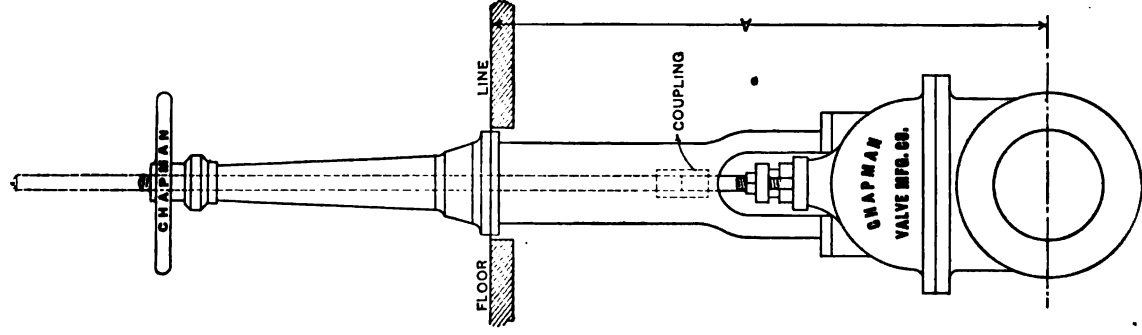


FIG. 336  
 RISING SPINDLE STAND  
 CONNECTED TO VALVE

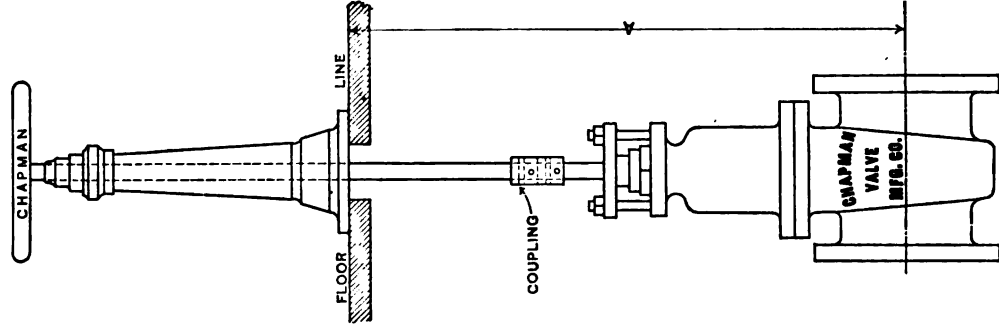


FIG. 335  
 STATIONARY SPINDLE STAND  
 CONNECTED TO VALVE

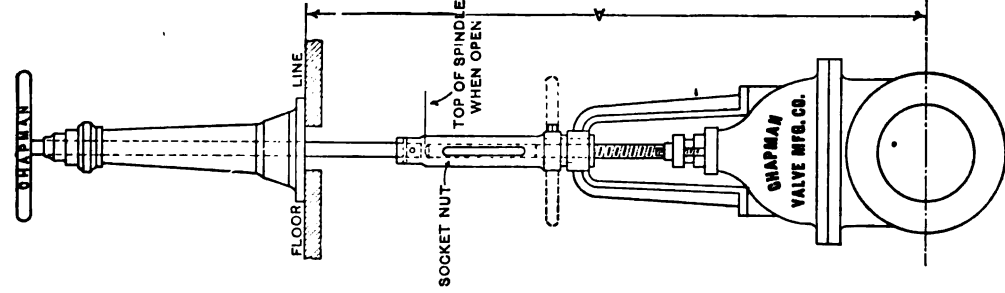


FIG. 337

STATIONARY SPINDLE STAND  
CONNECTED TO  
OUTSIDE SCREW AND YOKE VALVE

# FLOOR STANDS AND THEIR APPLICATION

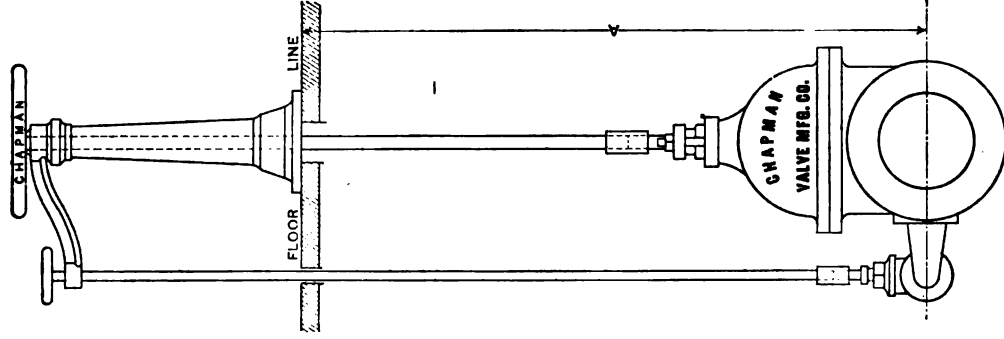


FIG. 338

STATIONARY SPINDLE STAND  
CONNECTED TO  
INSIDE SCREW VALVE WITH BY-PASS



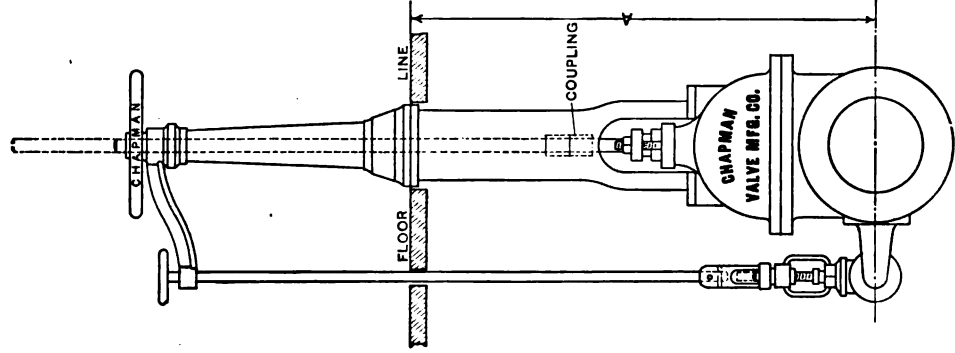


Fig. 339

VALVE WITH RISING SPINDLE FLOOR STAND

AND

OUTSIDE SCREW BY-PASS

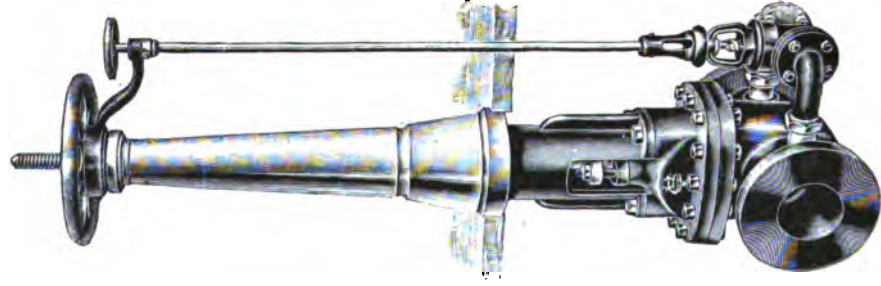


Fig. 340

**FLOOR STANDS AND THEIR APPLICATION**

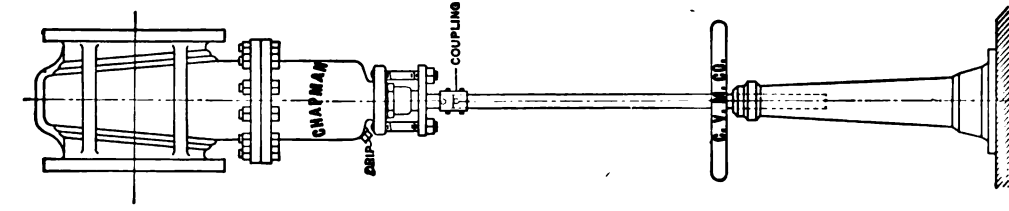
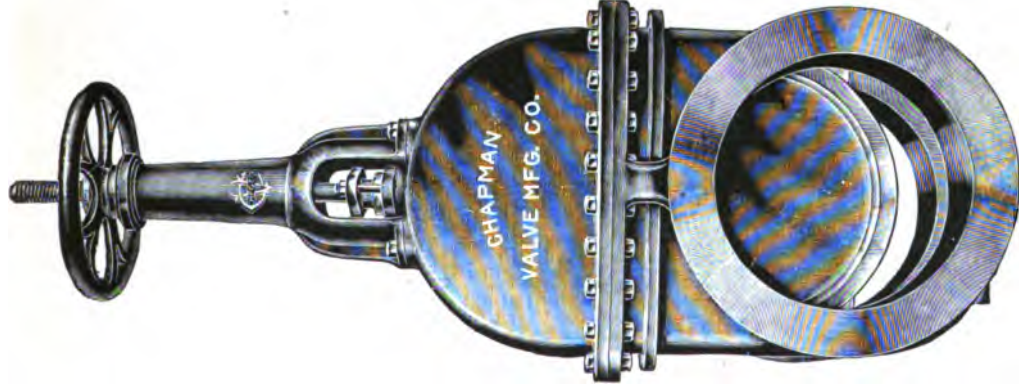


FIG. 34I

**INVERTED VALVE  
WITH  
FLOOR STAND**



**FIG. 342**

**RISING SPINDLE STAND  
 BOLTED DIRECT  
 TO VALVE CAP**

## FLOOR STANDS AND THEIR APPLICATION

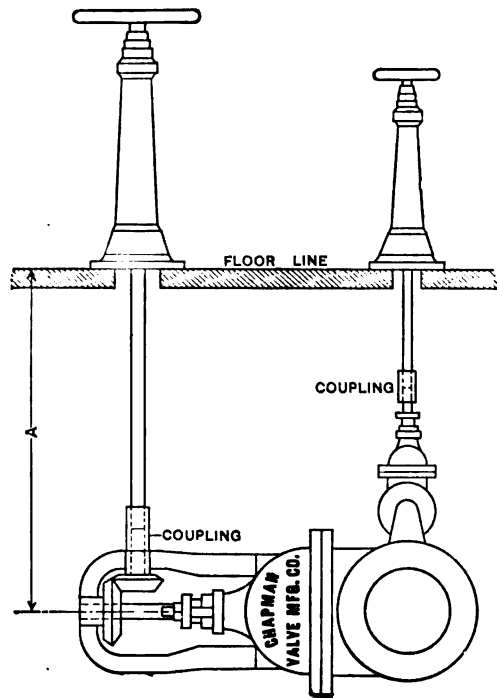


FIG. 343

GEARED VALVE WITH BY-PASS AND FLOOR STANDS

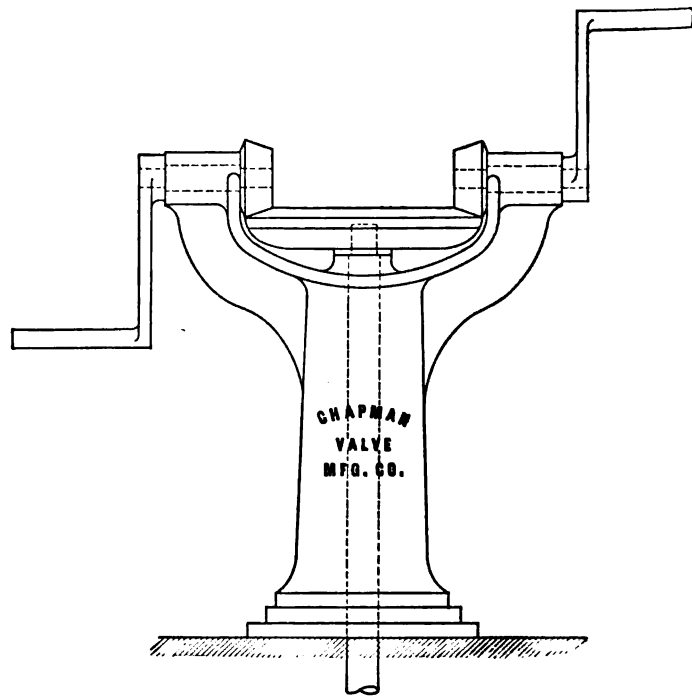


FIG. 344

GEARED FLOOR STAND

## FLOOR STANDS AND THEIR APPLICATION

## **GEARING FOR CHAPMAN GATE VALVES**

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### **GEARING FOR INSIDE SCREW VALVES**

Fig. 351 shows the style of miter gear which we apply to our bronze and iron inside screw valves from  $2\frac{1}{2}$  to 7 inches in size. The yoke or arm which carries the gears is bored out to form a bearing for the projecting end of the main spindle and is made to swivel on the valve cap and spindle. The operating shaft may be turned to any point desired.

Fig. 354 shows the bevel and miter gearing ordinarily used on our water, steam and gas valves 8 inches and larger in size. In this style of gearing the yoke is in one piece and is bolted to the valve cap at two points. It is bored out to form bearings for the main spindle, which projects through the gear wheel, and for the operating shaft, thus making a very firm and rigid arrangement. The operating spindle is at one side of the valve, as shown, but if so ordered can be placed at the end of the valve, at right angles to the position shown. This style of gearing is extensively used on underground valves of large size, both for convenience in operating and to secure a "gain in power;" it is used when it is inconvenient to stand the valve upright.

Spur gears shown in Fig. 355 are applicable to our water, steam and gas valves 8 inches and larger in size. This style of gearing is used on underground valves and on valves for power house work, pump station piping, etc. It is used to secure a "gain in power" for operating.

### **GEARING FOR OUTSIDE SCREW VALVES**

Fig. 353 shows the style of gearing we usually apply to our outside screw valves  $2\frac{1}{2}$  inches and larger in size. In this case the regular yoke is modified in shape to accommodate the gears and the hand wheel is removed, a gear wheel inside the yoke taking its place. The valve spindle rises through the yoke nut as in all our outside screw valves.

#### **GEARED VALVES WITH BY-PASS**

The Chapman by-pass arrangement is such that the by-pass spindle may be set either at right angles or parallel with the main valve spindle and it is seldom necessary to gear both main and by-pass valves. If desired, we can furnish both valves geared.

#### **SPECIAL GEARING**

Figs. 356 and 357 show outside screw valves with by-pass, both main and by-pass valves fitted with special spur gearing to be operated from a point directly below when it is not convenient to invert the valve. The first method was used when the valve spindle was vertical and the second when the valve spindle was set at an angle. A similar arrangement can be made to operate the valves from above.

Fig. 352 shows an outside screw valve with gearing arranged to be operated by a hand wheel directly at the valve and by a second hand wheel from the floor above or bulkhead at one side.

Either of the three arrangements shown above may be applied with equal facility to our inside screw valves, either with or without by-pass.

Fig. 358 shows a floor stand fitted with bevel gearing for operating very large valves or sluice gates.

#### **IN GENERAL**

Either of the above geared valves, Figs. 351 to 357, may be made to be operated by hand wheel, by nut or by floor stand. Unless otherwise ordered, we put a 2-inch square nut on the operating shaft of all sizes of our geared bell end water and gas gates. Light pressure valves with gearing can be made to open in the same number of turns as without gearing.

In addition to the above we are prepared to furnish any other style of gearing that may be required.

#### **VALVES WITH CHAIN WHEELS**

We furnish any of our valves with chain wheel, as per Fig. 359, in place of hand wheel or nut, without extra charge, if so ordered.

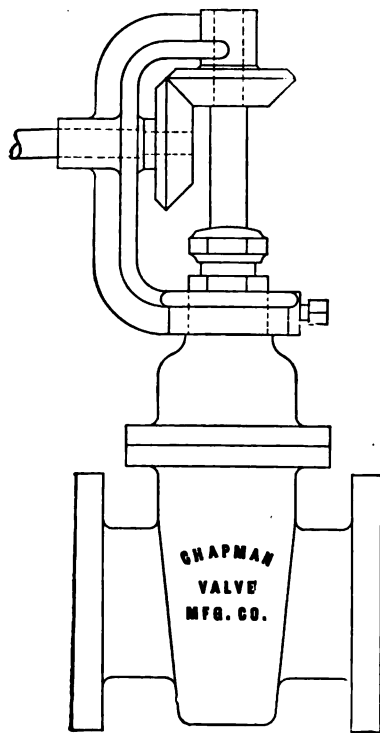


FIG. 351

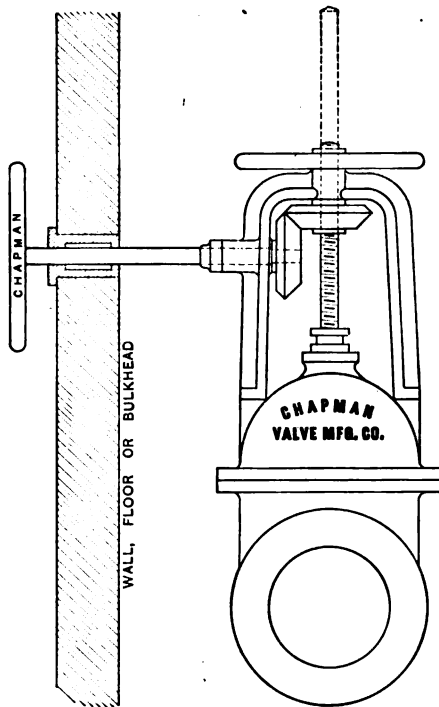


FIG. 352

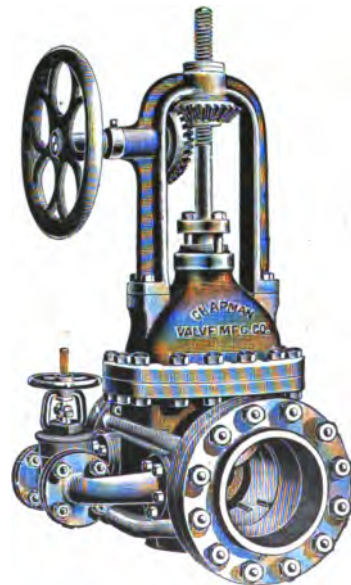


FIG. 353

# GEARING FOR CHAPMAN VALVES

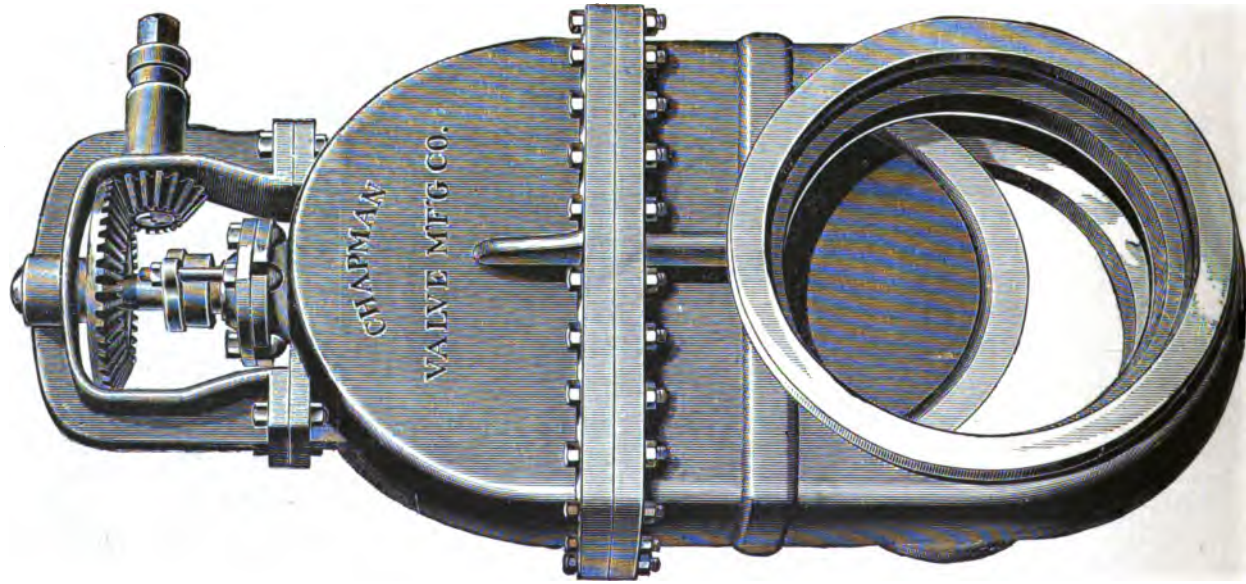


FIG. 354

BEVEL GEARING

GEARING FOR CHAPMAN VALVES

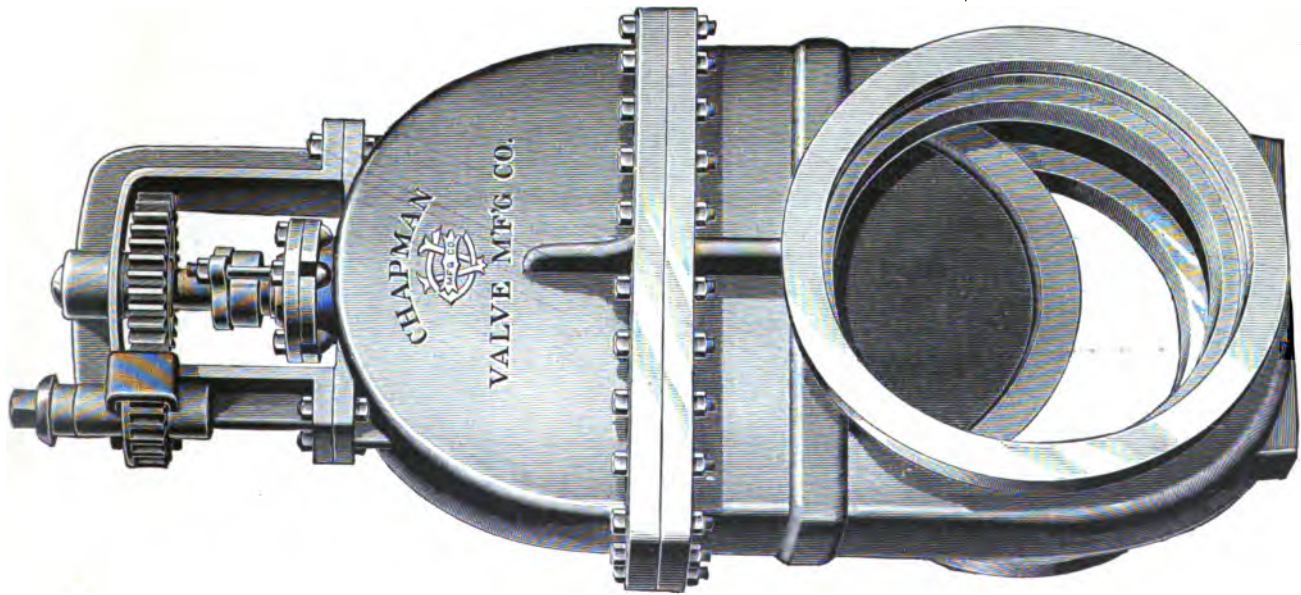


FIG. 355

SPUR GEARING

GEARING FOR CHAPMAN VALVES



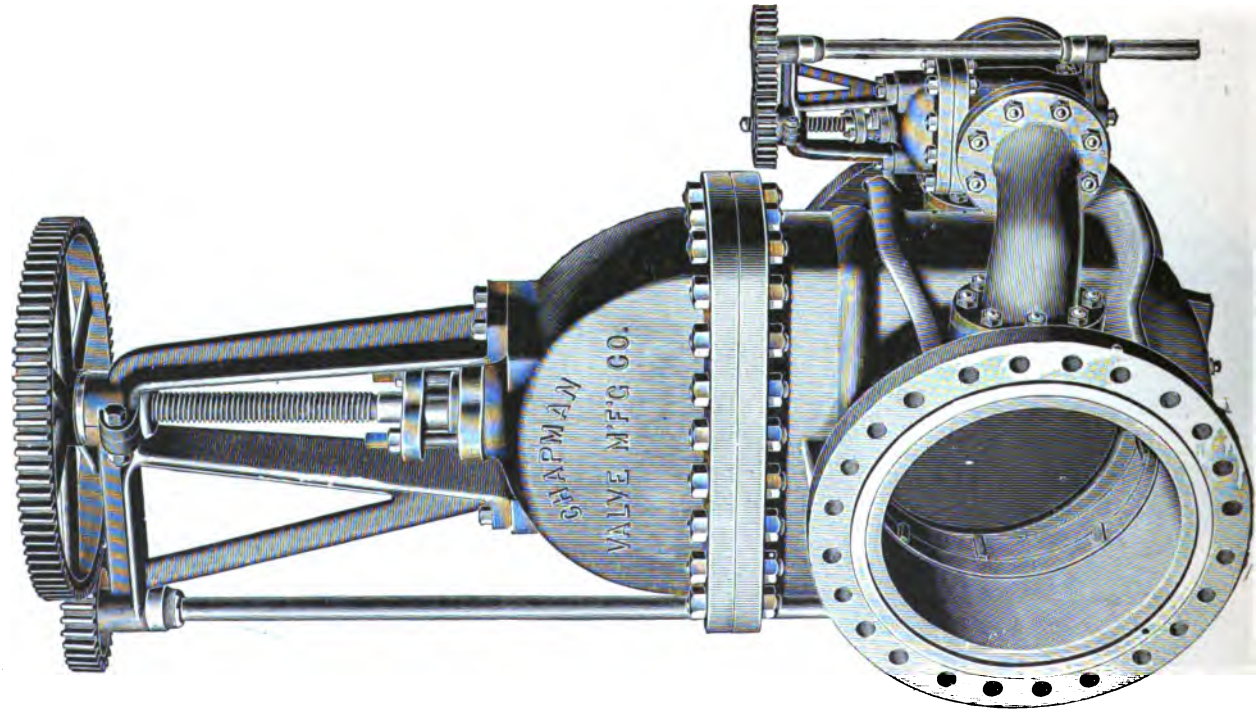


FIG. 356

8 SPECIAL 8PUR GEARING OPERATED FROM BELOW

GEARING FOR CHAPMAN VALVES

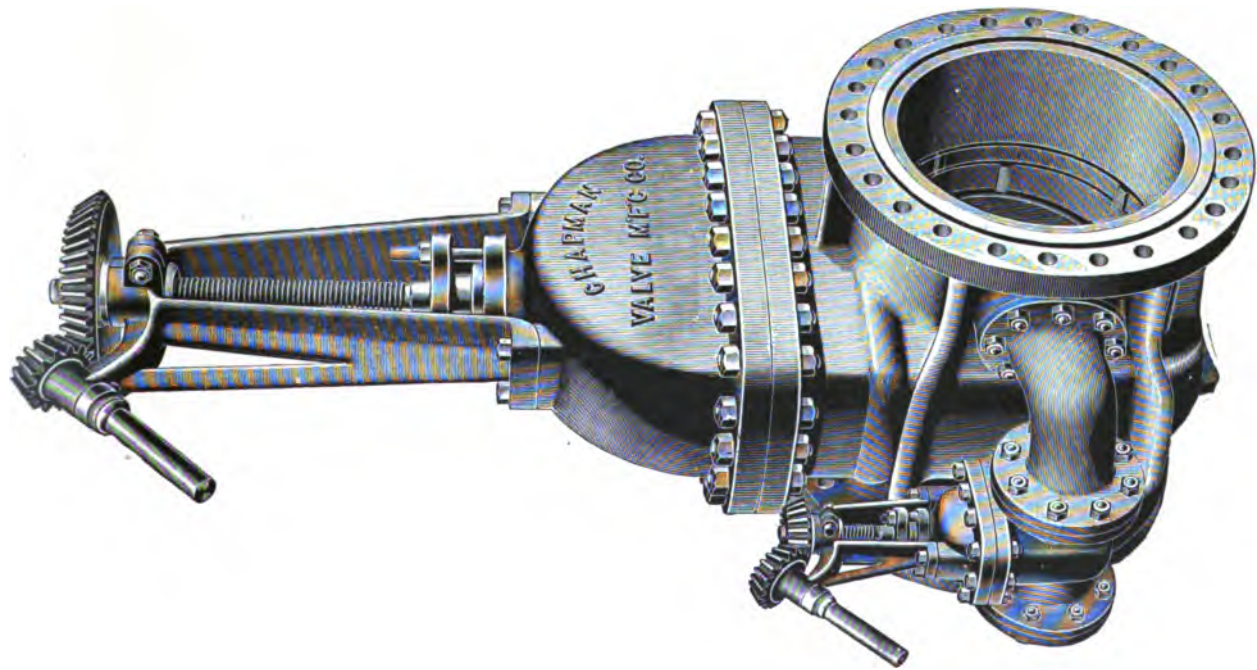


FIG. 357

SPECIAL SPUR GEARING OPERATED FROM BELOW

**GEARING FOR CHAPMAN VALVES**

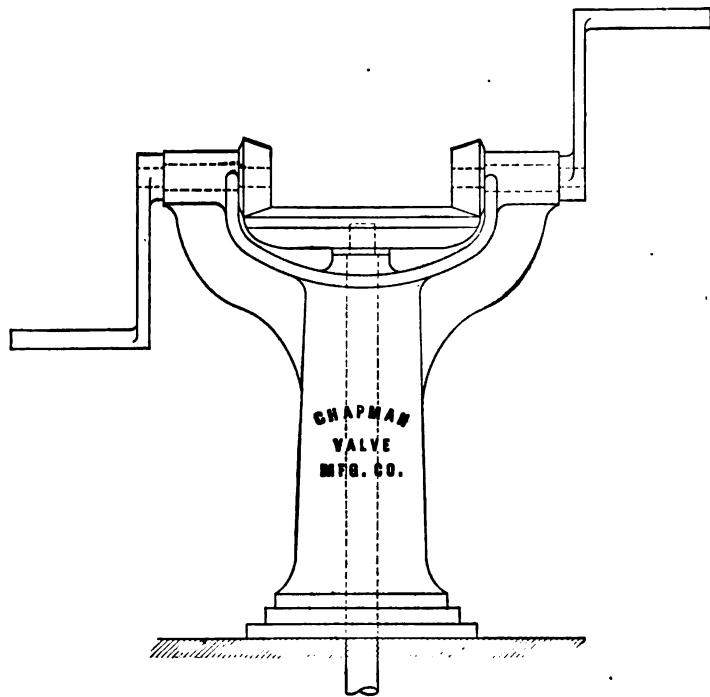


FIG. 358  
GEARED FLOOR STAND



FIG. 359  
CHAIN WHEEL

**ADDICKS' GEAR COVER AND LUBRICATOR****LIST No. 77****PATENT PENDING**

This device is intended to protect and lubricate the gearing of underground valves or valves in exposed positions. When used in connection with the ordinary cast iron valve box it does away with the necessity of an expensive brick gate chamber and large cast iron manhole cover. It consists of a heavy cast iron case or cover which encloses the gears and stuffing-box of the valve and effectually protects them from injury by dirt, gravel or other foreign substances. The cover may be filled with grease and insures perfect protection and lubrication of the gears without further attention or cost of maintenance.

This device is used extensively on large underground water and gas valves, and we recommend it for all places where it is desirable to protect or enclose the gears. We furnish it plain, as in Fig. 360, or fitted with the Chapman Geared Indicator, as in Fig. 361.

**PRICE LIST OF ADDICKS' GEAR COVER AND LUBRICATOR****LIST No. 77****EXTRA TO REGULAR GEARED VALVES**

SIZE OF VALVE INCHES		20 in. and smaller	22 in. to 28 in.	30 in. to 38 in.	40 in. to 50 in.
Gear Cover without Indicator	—Extra to Valve	\$50.00	\$61.00	\$80.00	\$102.00
Gear Cover with Indicator	— " " "	61.00	72.00	91.00	113.00
Weight,	lbs.				

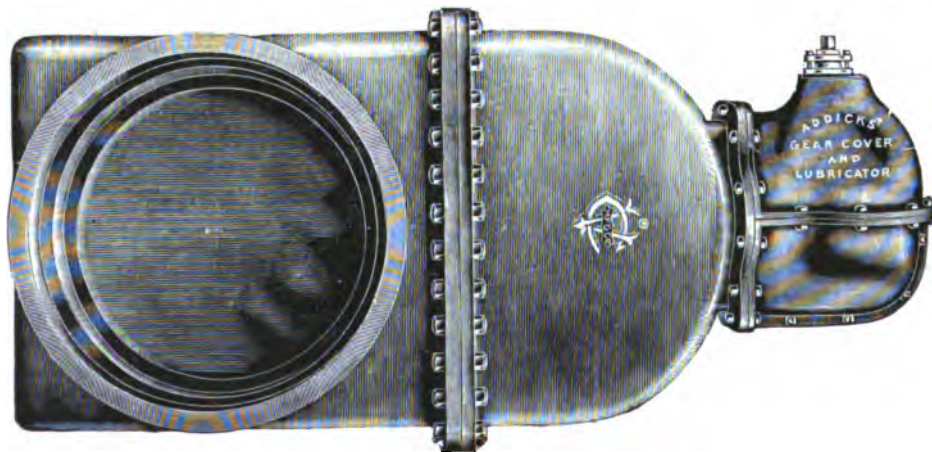


FIG. 360  
GEAR COVER WITHOUT INDICATOR



FIG. 361  
GEAR COVER WITH INDICATOR

**ADDICKS' GEAR COVER AND LUBRICATOR**

PATENT PENDING

## VALVES WITH HYDRAULIC OR PNEUMATIC LIFT

---

The accompanying cuts show respectively an outside view and a cross-section of a Chapman Gate Valve fitted with a lifting cylinder. The drawings show clearly the arrangement of the parts. We are prepared to furnish any of our bronze or iron valves with hydraulic or pneumatic lifting cylinders arranged to be operated by direct pressure from the pump or compressor or by the pressure from the main in which the valve is located. The size and design of the lifting cylinder and piston are made to suit the pressure and character of the operating fluid and the kind of service.

The larger sizes of valves so equipped are provided with the Chapman Starting Device (Patent Pending) shown in the cut. This device consists of a starting lever S having arms of unequal length, placed inside the hollow plug or gate and pivoted to it at P. The shorter arm is arranged to operate against the fulcrum F in the valve body and the longer end is engaged by the lower end of the valve spindle. The operation is as follows: the first upward movement of the lifting piston brings the collar L on the lower end of the valve spindle into contact with the starting lever S and the plug is started from its seat with the expenditure of the minimum amount of force. After the plug is started, the upper collar U on the spindle comes into contact with the carrying surface V in the top of the plug, as shown in dotted lines at X, and the further upward movement of the lifting piston fully opens the valve.

Connections for the operating fluid are made at A and B.

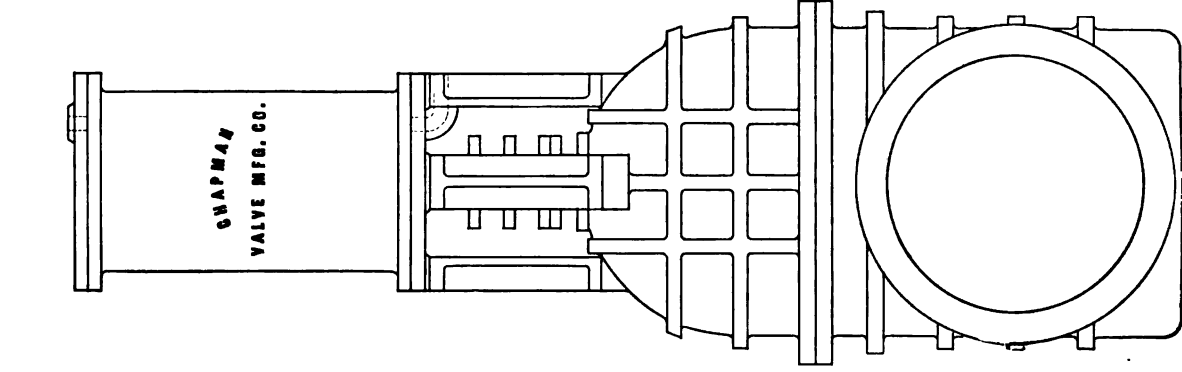


FIG. 362  
ELEVATION

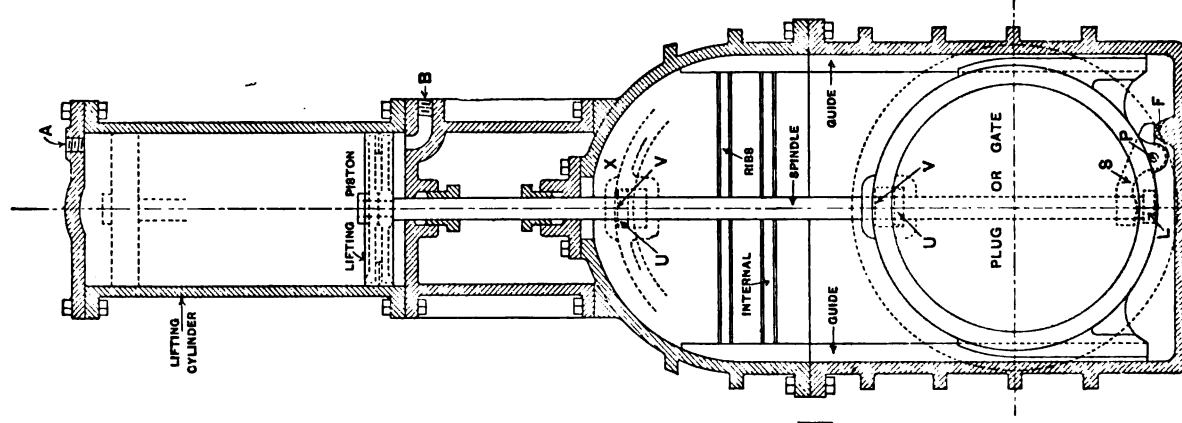


FIG. 363  
CROSS-SECTION

VALVE WITH LIFTING CYLINDER

## MOTOR-DRIVEN VALVES

---

In many cases it will be found convenient to operate large valves by means of an electric motor. This is particularly true in the case of dry-docks, large electric light or power stations, etc., where several large valves must be opened and closed frequently. The accompanying drawings show a Chapman valve arranged to be operated by an electric motor geared direct to the main spindle. The entire apparatus is self-contained (the motor being carried on a bracket from the valve cap) and occupies very little more space than the plain valve. Simple, economical and satisfactory wiring connections may be made for the motor and the operating station may be as remote from the valve as desired. We make other arrangements of motor and valve to meet conditions.



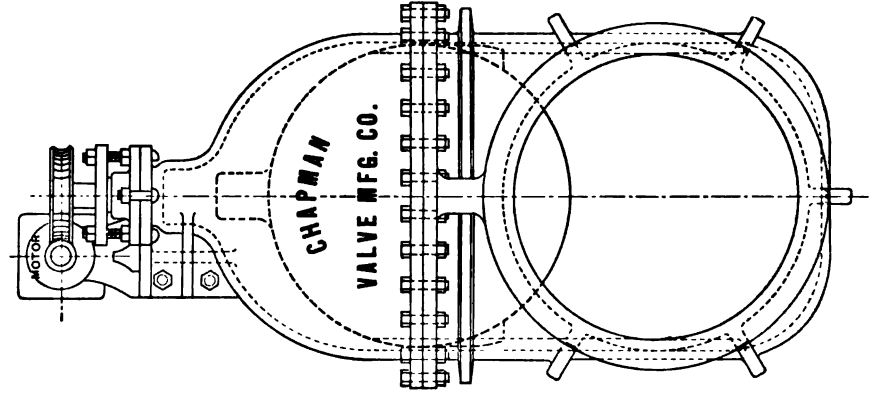
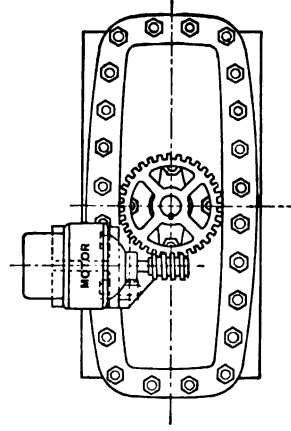


FIG. 364

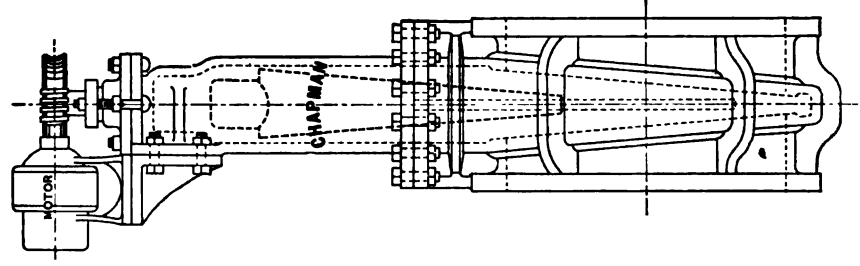


FIG. 365

**MOTOR-DRIVEN VALVE**



## SECTION VII.

CHAPMAN POST, ROOF AND FLUSH FIRE-HYDRANTS

WITH

BABBITT METAL AND BRONZE SEATS

AND

PLAIN OR INDEPENDENT VALVE HOSE NOZZLES



**CHAPMAN POST FIRE HYDRANTS****WITH BABBITT SEATS, BRONZE MOUNTINGS AND BRONZE-FACED PLUGS**

---

These hydrants are of the kind known as the Gate Hydrant and are made of cast iron with bronze mountings and special babbitt metal seats. The inlet or water supply at the bottom of the hydrant is controlled by a wedge-shaped gate or plug with bronze face closing against a babbitt metal seat in the body. This plug is operated from the top of the hydrant post by a bronze nut and iron extension rod turning a threaded bronze spindle which works in a bronze bushing or nut in the plug. The plug rises and falls on the spindle and opens and closes the inlet gradually, thus preventing water hammer; it is guided in its movement by ribs in the body which engage with grooves in the plug and prevent it from turning or coming into contact with its seats while opening or closing. The bronze face of the plug and the babbitt metal seats will not corrode and the hydrant will open and close easily, irrespective of the time it has been out of use. The water passages are large and ample allowance has been made for the space occupied by the plug, so that the loss of pressure from friction is reduced to a minimum.

The drip is bushed with brass (to prevent corrosion) and is constructed in the side of the hydrant body on a level with the water in the main; its operation is thus unaffected by any sediment brought in by the water and deposited in the bottom of the hydrant body. It is automatic in its operation and is opened and closed by the direct action of the gate without intermediate mechanism. It is so arranged that the moment the gate commences to rise, the drip outlet is sealed and remains sealed until the gate is closed. The drip being always open when the gate is closed, there is no liability of freezing, making a strictly frostproof hydrant.

The posts are of handsome design, made heavy and strong to stand hard usage. The nozzles are of bronze, with male hose threads, and have iron nozzle caps and chairs. The stuffing box is of bronze with screw packing nut, placed in the top of the post and protected by the post cap, held in place by two bronze tap bolts.

The operating or rod nut and the nuts for the nozzle caps are made to fit the same wrench and these, together with the hose nozzle thread gage are made to conform to the standard of the system in which the hydrants are to be used. We furnish these hydrants with bell, flange, screw or spigot ends and with or without frost case, as desired, and can provide either of them with steamer nozzle, if required.

The hose nozzles can be made with any form of hose clutch or coupling desired.

The Chapman Babbitt Seat Gate Fire Hydrant is superior to others in design, workmanship, material, interchangeability and strength of parts, ease of operation under any customary pressure, freedom from water hammer, perfect drip, durability and general reliability. Owing to the extreme simplicity of the design and the care exercised in its manufacture, it costs less to maintain than any other make of hydrant.

Unless otherwise ordered, all hydrants TURN TO RIGHT TO OPEN.

These hydrants are also made with bronze seats in the body without additional charge.

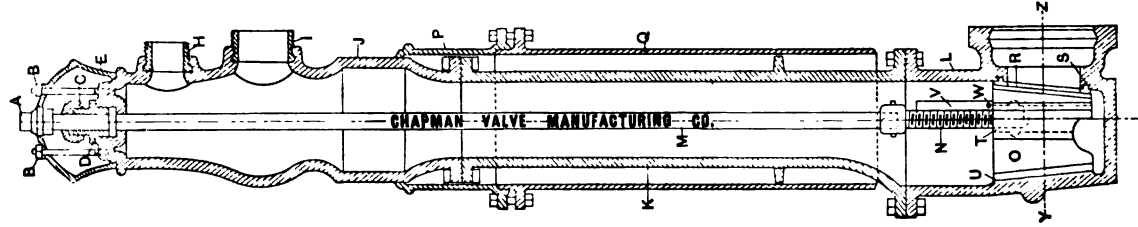
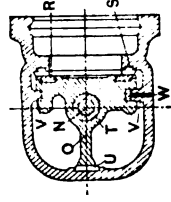


FIG. 375

- A—Bronze Rod Nut
- B—Bronze Tap Bolts
- C—Bronze Packing Nut
- D—Bronze Stuffing-box
- E—Iron Post Cap
- H—Bronze Hose Nozzle
- I—Bronze Steamer Nozzle
- J—Hydrant Post
- K—Standpipe or Barrel
- L—Hydrant Body
- M—Iron Extension Rod
- N—Bronze Spindle
- O—Gate or Plug
- P—Apron
- Q—Frost Case
- R—Bronze Face on Plug
- S—Babbitt or Bronze Seat
- T—Bronze Bushing in Plug
- U—Babbitted Wedging Surface
- V—Rib or Spline
- W—Drip Hole



SECTION Y-Z

FIG. 376

CHAPMAN POST FIRE HYDRANT WITH BRONZE MOUNTINGS  
AND BABBITT SEATS



FIG. 377  
ELEVATION

LIST No. 80

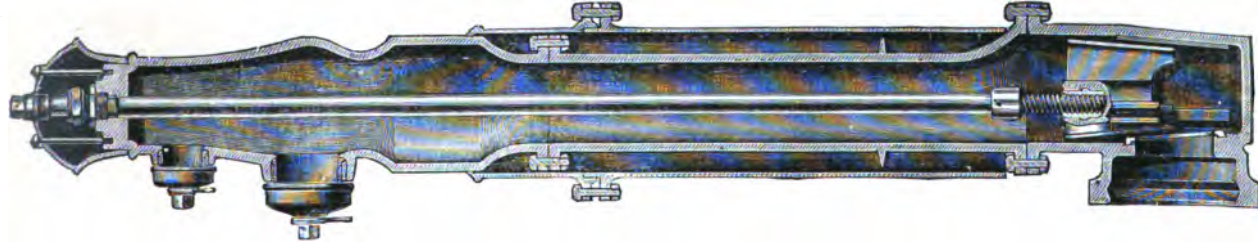


FIG. 378  
SECTION

**CHAPMAN POST FIRE-HYDRANTS  
WITH BABBITT SEATS AND BRONZE MOUNTINGS**

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 15

LIST NO. 80

**PRICE LIST OF CHAPMAN POST FIRE-HYDRANTS**

BABBITT SEATS AND BRONZE MOUNTINGS

BRONZE FACED PLUGS

Size of Hydrant or Diameter of Inlet Valve	3 IN.		4 IN.		5 IN.		6 IN.	
Size of Bell or Flange End Connection for Inlet Pipe	8 or 4 in.		4, 5 or 6 in.		5 or 6 in.		6 or 8 in.	
Inside Diameter of Stand-Pipe or Barrel	3½ in.		4½ in.		5½ in.		6½ in.	
Standard Length—Pavement to Bottom of Pipe	5 ft.		5 ft.		5 ft.		5 ft.	
NUMBER OF NOZZLES	LIST	WEIGHT	LIST	WEIGHT	LIST	WEIGHT	LIST	WEIGHT
One 2½-inch Hose Nozzle	\$27.00	251 lbs.	\$32.00	353 lbs.	\$37.50	423 lbs.	\$46.50	500 lbs.
Two 2½-inch Hose Nozzles	28.50	255 "	33.50	357 "	39.00	427 "	48.00	504 "
Three 2½-inch Hose Nozzles			35.20	361 "	40.75	431 "	50.00	508 "
One Steamer Nozzle	29.60	263 "	34.60	365 "	40.00	435 "	49.00	512 "
One Steamer Nozzle and One 2½-inch Hose Nozzle			36.00	369 "	41.50	439 "	50.50	516 "
One Steamer Nozzle and Two 2½-inch Hose Nozzles			37.50	373 "	43.00	443 "	52.00	520 "
One Steamer Nozzle and Three 2½-inch Hose Nozzles					44.75	447 "	53.75	524 "
Extra for One Additional Steamer Nozzle		17 "		17 "	4.00	17 "	4.10	17 "
Add or Deduct for each 6 in. difference from Standard Length (STAND PIPE)	.60	12 "	.70	14 "	.90	19 "	1.05	22 "
Extra for Outer Jacket or Frost Case	3.65	68 "	4.10	77 "	4.60	86 "	5.20	96 "
Add or deduct for each 6 in. difference from Standard Length (FROST CASE)	.35	7 "	.40	8½ "	.50	10 "	.55	12 "

**CHAPMAN POST FIRE HYDRANTS WITH INDEPENDENT VALVE ON EACH HOSE NOZZLE**  
**BABBITT SEATS AND BRONZE MOUNTINGS AND BRONZE-FACED PLUGS**

The Chapman Babbitt Seat independent valve hydrant is especially designed for cities and plants having a high pressure water supply, where it is not necessary to use steamers. This hydrant has an independent gate valve on each hose nozzle in addition to the usual main valve in the hydrant body, making it possible to couple on or take off any line of hose without interfering with the streams from the other nozzles. Each of these valves is operated by a nut and spindle from the outside and is independent of the others and of the main valve.

The inlet or water supply in the bottom of the hydrant is controlled by a wedge shaped gate or plug with bronze face closing against a babbitt metal seat. This plug is operated from the top of the hydrant post by a bronze nut and iron extension rod turning a threaded bronze spindle which works in a bronze bushing or nut in the plug. The plug rises and falls on the spindle and opens and closes the inlet gradually, thus preventing water hammer; it is guided in its movement by ribs in the body which engage with grooves in the plug and prevent it coming in contact with its seats while opening and closing.

The water supply to each nozzle is controlled by an independent wedge gate or plug with bronze face closing against a babbitt or bronze seat. These plugs move between guides and are operated from the top of the post by a bronze nut and spindle in the same manner as the main valve. Each valve is perfect in itself and, being closed by a wedging action, does not depend upon the pressure of the water to bring it to its seat. The bronze faces of the plugs and the babbitt metal seats will not corrode and the hydrant will open and close easily irrespective of the time it has been out of use.

The water passages are large and ample allowance has been made for the space occupied by the plugs, so that the loss of pressure from friction is reduced to a minimum. The drip is bushed with brass and is constructed in the side of the hydrant body on a level with the water in the main. It is automatic in its operation and is opened and closed by the direct action of the gate without intermediate mechanism. It is so arranged that the moment the gate commences to rise, the drip outlet is sealed and remains sealed until the gate is closed. The drip being always open when the gate is closed, there is no liability of freezing, making a strictly frost proof hydrant.



The posts are of handsome design and are made heavy and strong to withstand hard usage. The nozzles are of bronze, with male hose threads, and have iron nozzle caps and chains. The stuffing-box is of bronze with screw packing-nut placed in the top of the hydrant and protected by the post or hydrant cap held in place by two bronze tap bolts.

The operating or rod nut and the nuts for the nozzle caps are made the same size while the rod nuts for the independent nozzle valves are of smaller size. We furnish a combination wrench made to fit both sizes of nuts. All of these nuts, together with the hose nozzle thread gage, are made to conform to the standard of the system in which the hydrants are to be used.

We furnish these hydrants with bell, flange, screw or spigot ends and with or without frost case, as desired, and with any form of hose clutch or coupling on the nozzles.

The Chapman Babbitt Seat Independent Hydrant is superior to all other independent hydrants in design, workmanship, material, strength and interchangeability of parts, ease of operation under any pressure, freedom from water hammer, perfect drip, durability and general reliability. It costs less to maintain than any other make of independent hydrant.

Unless otherwise ordered, all hydrants turn to the Right to Open.

These hydrants are also made with bronze seats in the body without extra charge.



FIG. 379  
HEXAGON POST

**CHAPMAN POST FIRE-HYDRANTS WITH  
INDEPENDENT VALVE ON EACH HOSE NOZZLE  
BABBITT SEAT AND BRONZE MOUNTINGS**

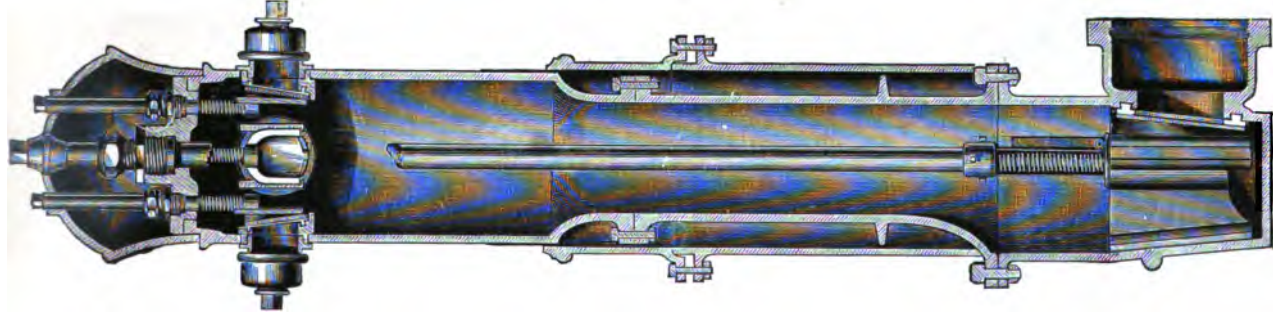


FIG. 380  
ROUND POST



FIG. 381  
OUTSIDE VIEW OF ROUND POST



FIG. 382  
ROUND POST WITH INDEPENDENT STEAMER NOZZLE

**CHAPMAN POST FIRE-HYDRANTS WITH INDEPENDENT VALVE ON EACH HOSE NOZZLE  
BABBITT SEAT AND BRONZE MOUNTINGS**

**CHAPMAN VALVE MANUFACTURING CO.**

**LIST No. 81**

**PRICE LIST OF CHAPMAN POST FIRE-HYDRANTS WITH INDEPENDENT VALVE ON EACH NOZZLE**

**RABBIT SEATS AND BRONZE MOUNTINGS**

**BRONZE FACED PLUG**

Size of Hydrant or Diameter of Inlet Valve	4 IN.		5 IN.		6 IN.		6 IN.	
Size of Bell or Flange End Connection for Inlet Pipe	4, 5 or 6 in.		5 or 6 in.		6 or 8 in.		6 or 8 in.	
Inside Diameter of Stand-Pipe or Barrel	4½ in.		5½ in.		6½ in.		6½ in.	
Standard Length—Pavement to Bottom of Pipe	5 ft.		5 ft.		5 ft.		5 ft.	
NUMBER OF NOZZLES—ALL WITH INDEPENDENT VALVES	HEXAGON POST						ROUND POST	
	LIST	WEIGHT	LIST	WEIGHT	LIST	WEIGHT	LIST	WEIGHT
Two 2½-inch Hose Nozzles			\$56.00				\$73.00	545 lbs.
Three 2½-inch Hose Nozzles			61.00				79.00	555 "
Four 2½-inch Hose Nozzles							85.00	565 "
One Steamer Nozzle and One 2½-inch Hose Nozzle							86.00	555 "
One Steamer Nozzle and Two 2½-inch Hose Nozzles							93.00	565 "
Extra for One Additional Steamer Nozzle							19.40	30 "
Add or Deduct for each 6 in. difference from Standard Length (STAND PIPE)			.90				1.05	22 "
Extra for Outer Jacket or Frost Case*			4.60				5.15	96 "
Add or deduct for each 6 in. difference from Standard Length (FROST CASE)			.50				.55	12 "

\*Chapman Hydrants are Self-Draining and Frost-Proof—Frost Cases are unnecessary

Prices for sizes not listed given upon application

**CHAPMAN POST FIRE HYDRANTS****WITH BRONZE SEATS AND MOUNTINGS AND REMOVABLE RUBBER-FACED PLUGS**

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To meet the demand for a hydrant which may be repaired without the expense and delay of tearing up a paved street, we have designed the Chapman "Rubber Seat" Hydrant, which is so arranged that the working parts may be removed and repaired or replaced by new ones without digging up the street or disturbing the hydrant or its connections. This hydrant is of the kind known as the Gate Hydrant and is made of cast iron with bronze mountings and seat rings and special rubber seats or faces. The inlet or water supply at the bottom of the hydrant is controlled by a gate or plug with vertical face, operated from the top of the hydrant post by a bronze nut and iron extension rod turning a threaded bronze spindle which works in a solid bronze wedge nut at the back of the plug. The plug is faced with a heavy renewable seat ring of special rubber, held in place by a bronze clamp plate and nut, and closes against a bronze seat ring in the hydrant body. It is guided in its movement by ribs in the body which engage with grooves in the plug and rises and falls on the spindle, closing the inlet gradually and thus preventing water hammer. The operation is as follows. In closing, the action of the spindle forces the plug downward clear of its seats until it comes into contact with a stop in the bottom of the hydrant body; the wedge nut, acting on an inclined surface in the back of the body then forces the plug horizontally and squarely against its seat. In opening, the wedge nut is released first and the gate is forced clear of its seat and held there during its movement, so that at no time in either opening or closing is there any frictional contact between the gate and its seat tending to wear the rubber face.

The water passages are large and ample allowance has been made for the space occupied by the plug, so that the loss of pressure from friction is reduced to a minimum. The drip outlet is bushed with brass and is constructed in the side of the hydrant body on a level with the water in the main. It is automatic in its operation and is opened and closed by the direct

action of the gate without intermediate mechanism. It is so arranged that the moment the gate commences to rise the drip outlet is sealed and remains sealed until the gate is closed. The drip being always open when the gate is closed there is no liability of freezing, making a strictly frost proof hydrant.

The posts are of handsome design, made heavy and strong to stand hard usage. The nozzles are of bronze with male hose threads, and have iron nozzle caps and chains. The stuffing-box is of bronze with screw packing-nut, placed in the top of the post and protected by the post or hydrant cap, held in place by two bronze tap bolts.

The operating or rod nut and the nuts for the nozzle caps are made to fit the same wrench and, together with the hose nozzle thread gauge, are made to conform to the standard of the system in which the hydrants are to be used. We furnish these hydrants with bell, flange, screw or spigot ends and with or without frost case, and can provide either size with steamer nozzle, if desired. The nozzles can be made with any form of hose clutch or coupling desired.

The Chapman Rubber Seat Fire Hydrant is superior to all others in design, workmanship, material, interchangeability, strength and accessibility of parts, ease of operation under any pressure, freedom from water hammer, perfect drip, durability and general reliability. It costs less to maintain than any other make of hydrant. Unless otherwise ordered, all hydrants turn to the Right to Open.

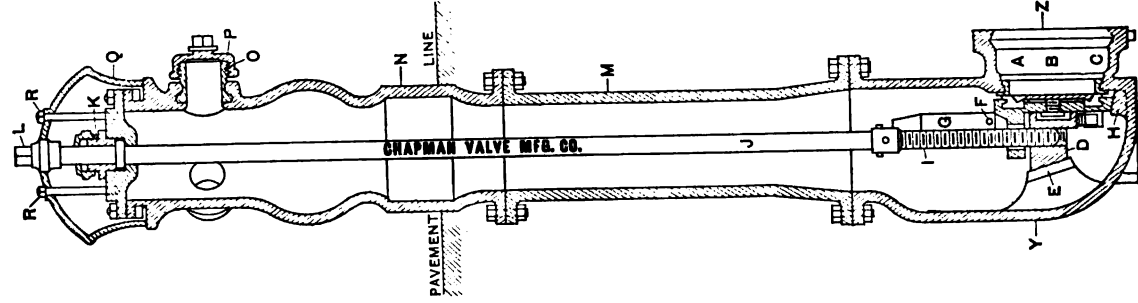
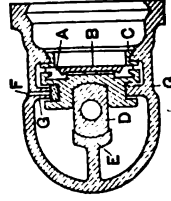


FIG. 383

- A—Removable Rubber Face Ring.  
 B—Bronze Clamp Plate.  
 C—Bronze Seat Ring, leaded in.  
 D—Bronze Wedge Nut.  
 E—Wedging Surface.  
 F—Brass Bushed Drip Hole.  
 G—Rib or Spline in Body.  
 H—Stop.  
 I—Bronze Spindle.  
 J—Iron Extension Rod.  
 K—Bronze Stuffing-Box.  
 L—Bronze Rod Nut.  
 M—Standpipe or Barrel.  
 N—Hydrant Post.  
 O—Bronze Nozzle, leaded in.  
 P—Iron Nozzle Cap.  
 Q—Iron Post Cap.  
 R—Bronze Tap Bolts.



SECTION Y-Z

FIG. 384

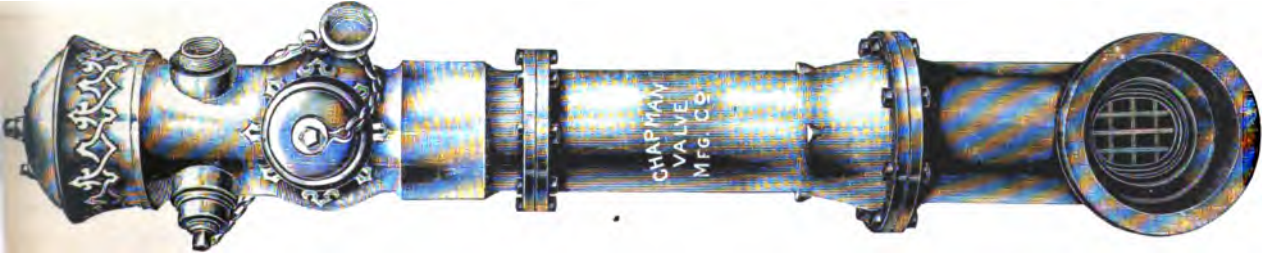


FIG. 385

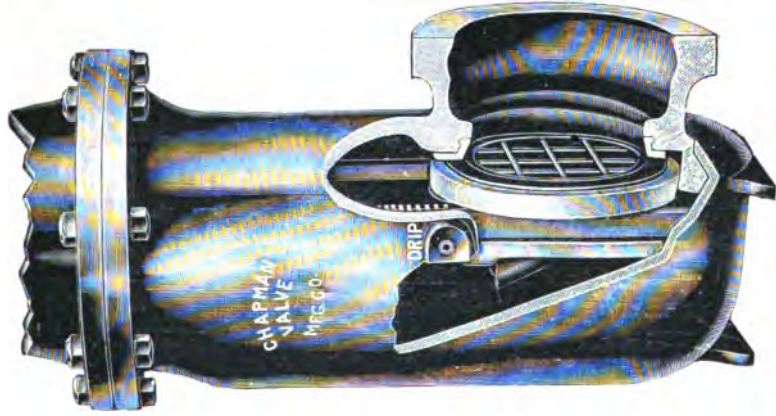


FIG. 386

ENLARGED VIEW  
OF  
HYDRANT BODY  
SHOWING  
PLUG, DRIP, BELL END, ETC.

CHAPMAN POST FIRE-HYDRANTS WITH  
BRONZE MOUNTINGS AND REMOVABLE RUBBER-FACED PLUGS



**CHAPMAN VALVE MANUFACTURING CO.**

**LIST No. 82**

**PRICE LIST OF CHAPMAN POST FIRE HYDRANTS**

**BRONZE SEATS AND MOUNTINGS**

**REMOVABLE RUBBER FACED PLUGS**

Size of Hydrant or Diameter of Inlet Valve	4 IN.		5 IN.		6 IN.	
Size of Bell or Flange End Connection for Inlet Pipe	4 or 6 in.		5 or 6 in.		6 or 8 in.	
Inside Diameter of Stand Pipe or Barrel	5½ in.		6½ in.		7½ in.	
Standard Length-Pavement to Bottom of Pipe	5 ft.		5 ft.		5 ft.	
NUMBER OF NOZZLES	LIST	WEIGHT	LIST	WEIGHT	LIST	WEIGHT
One 2½-inch Hose Nozzle	\$35.50	331 lbs.	\$41.75	405 lbs.	\$51.00	533 lbs.
Two 2½-inch Hose Nozzles	37.00	335 "	43.50	409 "	52.75	542 "
Three 2½-inch Hose Nozzles	38.50	339 "	45.00	413 "	54.50	546 "
One Steamer Nozzle	38.00	343 "	44.25	417 "	53.75	550 "
One Steamer Nozzle and One 2½-inch Hose Nozzle	39.50	347 "	45.75	421 "	55.25	554 "
One Steamer Nozzle and Two 2½-inch Hose Nozzles	41.00	351 "	47.25	425 "	56.75	558 "
One Steamer Nozzle and Three 2½-inch Hose Nozzles			49.00	429 "	58.50	562 "
Extra for One Additional Steamer Nozzle	4.00	17 "	4.00	17 "	4.10	17 "
Add or deduct for each 6-inch difference from Standard Length (Stand Pipe)	.70	14 "	.75	17 "	.90	22 "
Extra for Outer Jacket or Frost Case*				66 "		
Add or deduct for each 6-inch difference from Standard Length (Frost Case)*				10 "		

\*Chapman Hydrants are Self-Draining and Frost Proof—Frost Cases are unnecessary

**CHAPMAN POST FIRE HYDRANTS WITH INDEPENDENT VALVE ON EACH HOSE NOZZLE****BRONZE SEATS AND MOUNTINGS AND REMOVABLE RUBBER-FACED PLUGS**

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The Chapman "Rubber Seat" Independent Valve Hydrant is designed for use in cities and plants having a high pressure water supply, where it is not necessary to use steamers. Being made with a rubber-faced gate or plug and working parts which may be removed and repaired, or replaced by new ones, without digging up the street or disturbing the hydrant or its connections, it is especially adapted for use in paved streets or yards.

This hydrant has an independent gate valve on each hose nozzle in addition to the usual main valve in the hydrant body, making it possible to couple on or take off any line of hose without interfering with the streams from the other nozzles. Each of these valves is operated by a nut and spindle from the outside and is independent of the others and of the main valve.

The inlet or water supply at the bottom of the hydrant is controlled by a gate or plug with vertical face, operated from the top of the hydrant by a bronze nut and iron extension rod turning a threaded bronze spindle which works in a solid bronze wedge nut at the back of the plug. It is guided in its movement by ribs in the body which engage with grooves in the plug and rises and falls on the spindle, closing the inlet gradually and thus preventing water hammer. The operation is as follows: In closing, the action of the spindle forces the gate downward clear of its seat until it comes in contact with a stop in the bottom of the valve body; the wedge nut, acting on an inclined surface in the back of the body then forces the plug horizontally and squarely against its seat. In opening, the wedge nut is released first and the plug is forced clear of its seats and held there during its movement, so that at no time, in either opening or closing, is there any frictional contact between the plug and its seat, tending to wear the rubber face.

The water supply to each nozzle is controlled by an independent wedge gate or plug with bronze face, closing against a bronze seat. These plugs move between guides and are operated from the top of the post by bronze nuts and threaded spindles turning in bronze nuts in the plugs. They rise and fall on the spindles and close with a wedging action. Each valve is perfect

in itself and does not depend upon the pressure of the water to bring it to its seat. The faces and seats of the plugs will not corrode and the hydrant will open and close easily, irrespective of the time it has been out of use.

The water passages are large and ample allowance has been made for the space occupied by the plugs, so that the loss of pressure from friction is reduced to a minimum. The drip outlet is constructed in the side of the hydrant body on a level with the water in the main and is bushed with brass. It is automatic in its operation and is opened and closed by the direct action of the plug without intermediate mechanism. It is so arranged that the moment the gate commences to rise the drip outlet is sealed and remains sealed until the gate is closed. The drip being always open when the gate is closed there is no liability of freezing, making a strictly frost-proof hydrant.

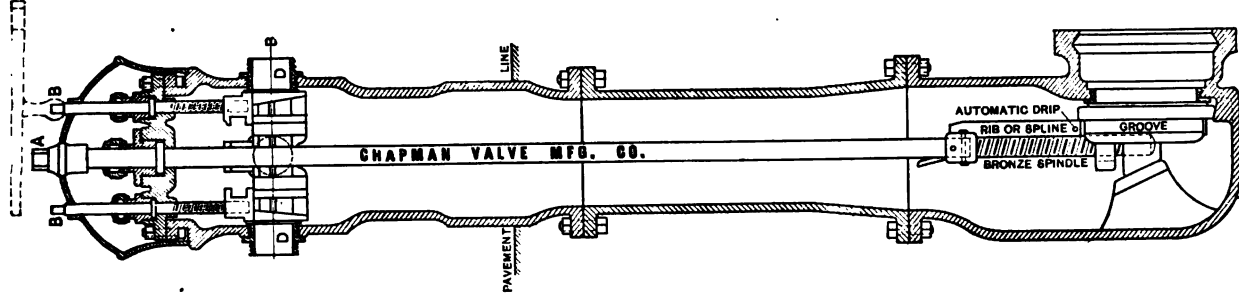
The posts are of handsome design, made heavy and strong to stand hard usage. The nozzles are of bronze, with male hose threads, and have iron nozzle caps and chains. The stuffing-box is of bronze with screw packing-nut, placed in the top of the post and protected by the post or hydrant cap, held in place by two bronze tap bolts.

The operating or rod nut and the nuts for the nozzle caps are made the same size while the rod nuts for the independent valves are of smaller size. We furnish a combination wrench made to fit both sizes of nuts. The operating nuts for both main and independent valves, the nozzle cap nuts and the hose nozzle thread gage are made to conform to the standard of the system in which the hydrants are to be used.

We furnish these hydrants with bell, flange, screw or spigot ends and with or without frost case, as desired, and with any form of hose clutch or coupling on the nozzles.

The Chapman Rubber Seat Independent Hydrant is superior to all others in design, workmanship, material, interchangeability, strength and accessibility of parts, ease of operation under any pressure, freedom from water hammer, perfect drip, durability and general reliability. It costs less to maintain than any other make of independent hydrant.

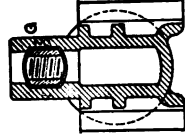
Unless otherwise ordered, all hydrants turn to the Right to Open.



SECTION OF  
COMPLETE HYDRANT.

FIG. 387

**BRONZE MOUNTINGS AND REMOVABLE RUBBER-FACED PLUG**



SECTIONAL ELEVATION OF  
INDEPENDENT NOZZLE-VALVE,  
G -RENEWABLE BRONZE NUT

FIG. 388

- A—Rod Nut for Main Valve
- B—Rod Nut for Independent  
Nozzle Valve
- D—Independent Nozzles

**CHAPMAN  
POST FIRE HYDRANT  
WITH  
INDEPENDENT VALVE  
ON  
EACH HOSE NOZZLE**

LIST NO. 83



FIG. 389  
HEXAGON POST

CHAPMAN POST FIRE-HYDRANTS WITH INDEPENDENT VALVE  
ON EACH HOSE NOZZLE  
BRONZE MOUNTINGS AND REMOVABLE RUBBER-FACED PLUG



FIG. 390  
OCTAGON POST

**CHAPMAN VALVE MANUFACTURING CO.**

**LIST NO. 84**

**PRICE LIST OF CHAPMAN POST FIRE-HYDRANTS WITH INDEPENDENT VALVE ON EACH NOZZLE**

**BRONZE SEAT AND MOUNTINGS**

**REMOVABLE RUBBER-FACED PLUG**

Size of Hydrant or Diameter of Inlet Valve	4 IN.		5 IN.		6 IN.		8 IN.	
Size of Bell or Flange End Connection for Inlet Pipe	4, 5 or 6 in.		5 or 6 in.		6 or 8 in.		6 or 8 in.	
Inside Diameter of Stand-Pipe or Barrel	5 $\frac{3}{8}$ in.		6 $\frac{5}{8}$ in.		7 $\frac{1}{4}$ in.		7 $\frac{1}{4}$ in.	
Standard Length—Pavement to Bottom of Pipe	5 ft.		5 ft.		5 ft.		5 ft.	
NUMBER OF NOZZLES	HEXAGON POST						OCTAGON POST	
	LIST	WEIGHT	LIST	WEIGHT	LIST	WEIGHT	LIST	WEIGHT
Two 2 $\frac{1}{2}$ -inch Hose Nozzles								
Three 2 $\frac{1}{2}$ -inch Hose Nozzles								
Four 2 $\frac{1}{2}$ -inch Hose Nozzles								
Add or Deduct for each 6 in. difference from Standard Length (STAND PIPE)								
Extra for Outer Jacket or Frost Case*								
Add or deduct for each 6 in. difference from Standard Length (FROST CASE)								

\*Chapman Hydrants are Self-Draining and Frost Proof—Frost Cases are unnecessary  
Prices given upon application

## CHAPMAN FLUSH HYDRANTS

BABBITT SEATS AND BRONZE MOUNTINGS

BRONZE-FACED PLUGS

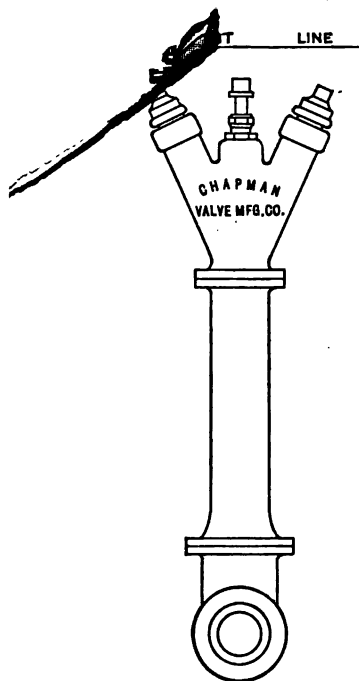


FIG. 391

These hydrants are intended for use where it is objectionable to have a post projecting above the surface of the ground. They are made with the valve body and stand pipe described in List No. 80, and in place of the post have a Y casting or Siamese connection with two hose nozzles and operating or rod nut for the main valve, as shown in the cut. The top of this Y is just below the street surface and the entire hydrant is enclosed by a substantial cast iron box or casing with heavy removable cover.

The top of the cover is set flush with the surface and the casing is entirely independent of the hydrant, thus preventing injury from heavy traffic across the cover. The water supply is controlled by the main valve at the bottom, as usual, and the hydrant has the Chapman Automatic Drip, previously described.

The operating nut and the nozzle cap nuts are of the same size and are made to conform in shape and dimensions to the standard of the system in which the hydrants are used. The hose nozzle threads are made to conform to the standard of the user, or the nozzles are provided with any form of hose clutch or coupling desired, at an additional cost.

We can also furnish these hydrants with the Chapman Rubber Seat Valve and Body described in List No. 82.

These flush hydrants are of the same quality of material and workmanship as our Post Hydrants and will be found satisfactory in all respects.

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 84

PRICE LIST OF CHAPMAN FLUSH-HYDRANTS

BABBITT SEATS AND BRONZE MOUNTINGS

BRONZE FACED PLUGS

Size of Hydrant or Diameter of Inlet Valve	3 IN.		4 IN.		5 IN.		6 IN.	
Size of Bell or Flange End Connection for Inlet Pipe	3 or 4 in.		4 or 6 in.		5 or 6 in.		6 or 8 in.	
Inside Diameter of Stand-Pipe or Barrel	3½ in.		4½ in.		5½ in.		6½ in.	
Standard Length—Pavement to Bottom of Pipe	5 ft.		5 ft.		5 ft.		5 ft.	
NUMBER OF NOZZLES	LIST	WEIGHT	LIST	WEIGHT	LIST	WEIGHT	LIST	WEIGHT
One 2½-inch Hose Nozzle								
Two 2½-inch Hose Nozzles			\$32.00	239 lbs.				
Three 2½-inch Hose Nozzles								
Extra for One Steamer Nozzle								
Add or deduct for each 6 in. of Stand-Pipe			.70	14 "				
Extra for Frost Case								
Add or deduct for each 6 in. of Frost Case								

Prices for sizes not listed given upon application





FIG. 392

FOR REGULAR HYDRANT



FIG. 393

FOR INDEPENDENT-VALVE HYDRANT



FIG. 394

WITH HOSE SPANNER

**CHAPMAN HYDRANT WRENCHES**

### CHAPMAN POST FIRE-HYDRANTS WITH SUPPLEMENTARY VALVE ON INLET

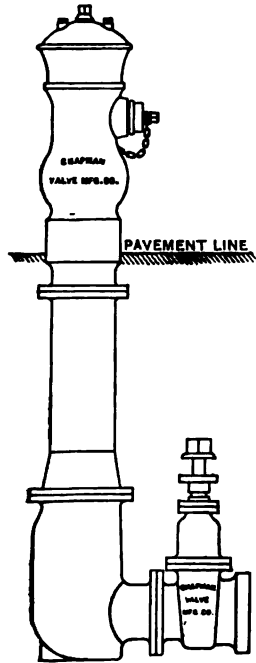


FIG. 395

To provide a convenient method of shutting the water off a hydrant to permit access for repairs, etc., we fit any of our hydrants with an auxiliary gate valve on the inlet in addition to the usual main valve in the hydrant body. This auxiliary valve is intended to remain open except when work is being done on the hydrant. It should be provided with an ordinary cast-iron valve box extending to the surface.

This combination is particularly suitable for the style of hydrants shown in Lists 82 and 83. These hydrants have removable plugs and working parts and when fitted with this auxiliary valve afford every facility for quick and easy repairs.

The auxiliary valve is our List 25 gate valve with babbitt seats and bronze mountings, but provided with one flange end for bolting to the hydrant body and one bell end for connecting to the pipe. It is made the same size as the main or inlet valve of the hydrant, with bell end for the same size pipe. If desired, the bell end may be made to receive pipe one or two sizes larger, as listed on the opposite page.

The list prices are in addition or EXTRAS to the hydrant prices in Lists 80, 81, 82 and 83; they include the extra cost of the flange end on the hydrant and the cost of the auxiliary valve complete, bolted to the hydrant, as shown in the accompanying cut.

The auxiliary valve may also have flange connection on the pipe end without additional cost.

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 85

**ADDITIONAL LIST PRICES FOR SUPPLEMENTARY VALVES**

ON HYDRANTS IN LISTS 80, 81, 82, 83 AND 84

Size of Hydrant or Diameter of Inlet Valve	3 IN.		4 IN.			5 IN.		6 IN.	
Diameter of Port of Supplementary Valve	3 IN.		4 IN.			5 IN.		6 IN.	
Size of Bell or Flange End Connection for Inlet Pipe	3 in.	4 in.	4 in.	5 in.	6 in.	5 in.	6 in.	6 in.	8 in.
Price—Extra to Lists 80, 81, 82, 83 or 84	\$9.50	\$9.75	\$12.00	\$12.50	\$12.75	\$14.00	\$14.00	\$17.50	\$18.25
Extra for Drilling Inlet Flange of Supplementary Valve	.10	.10	.10	.10	.15	.10	.15	.15	.20

## CHAPMAN ROOF HYDRANTS

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These hydrants are recommended by the Fire Underwriters for use on the roofs of mills, factories, public buildings, etc. They are made as shown in the accompanying drawing. A hydrant post is set on the roof of the building and connected with a water pipe from the fire protection system inside the building. The water supply to the hydrant is controlled by one of our automatic drip valves, placed in the pipe inside the building and arranged to be operated from the roof by a handwheel with extension rod. The hydrant post is the same as on our regular hydrants and may have either plain hose nozzles or independent nozzles, each controlled by a separate valve.

The drip is automatic in its operation and is opened and closed by the direct action of the gate or plug without intermediate mechanism. It is so arranged that the moment the gate commences to open, the drip outlet is sealed and remains sealed until the gate is closed. It drains the water from the hydrant post and the pipe above the gate, and being always open when the valve is closed, there is no liability of freezing, making the hydrant strictly frost-proof. The drip outlet is tapped for a small drain pipe.

The extension rod of the valve is provided with a cast iron sleeve where it goes through the roof. Provision is made on this sleeve and on the hydrant post for flashing around the openings. We make these hydrants to suit 3, 4, 5 or 6 inch pipe and with from 2 to 4 plain or independent nozzles, as desired. We do not list them, but will be pleased to submit prices on application.

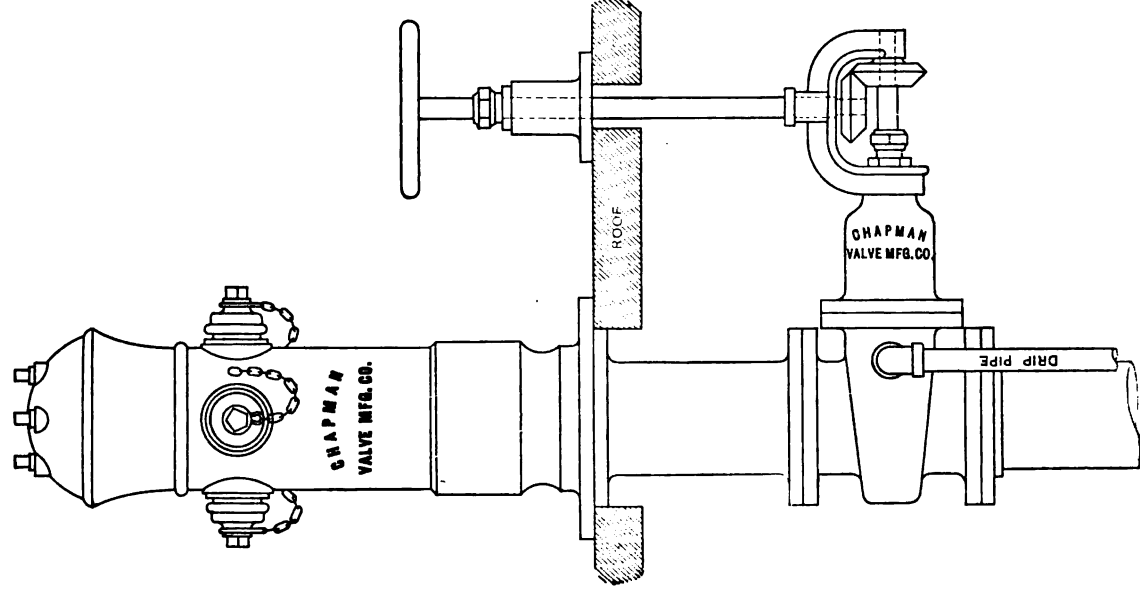


FIG. 396

CHAPMAN ROOF HYDRANT



SECTION VIII.

CHAPMAN SLUICE GATES

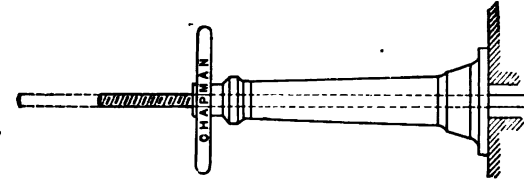


**CHAPMAN SLUICE GATES****RISEING SPINDLES****FLAT, FLANGED, BELL OR SPIGOT FRAMES****BABBITT METAL SEATS**

These gates are intended for use under light or medium pressure and should be placed with the pressure on the back of the plug. The regular gates are made with round openings and have flat frames for bolting to the wall. They are arranged to be operated by our rising spindle floor stands as shown in the cuts, thus bringing the operating screw into a position where it can be inspected and oiled. The plugs or gates close between babbitted wedging surfaces and do not depend upon the pressure to bring them to their seats. They have iron faces and special babbitt metal seats and are guided by ribs on the edges or sides which engage with grooves in the frames and prevent the plugs from turning. The plugs are provided with wrought iron stubs for welding to the extension rods of the floor stands.

If desired, we make these gates with bronze-faced plugs; with flange, bell or spigot ends on the frames for connecting to pipe or building into the wall; with stationary spindles to be operated by our stationary spindle floor stands; or with opening of any shape desired, for which we charge extra.

We shall be pleased to quote prices for sluice-gate, floor stand and rod, complete, upon application.



FLAT FRAME

FIG. 397

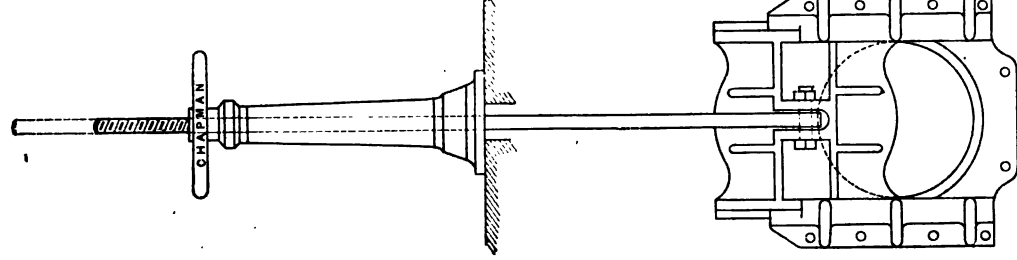
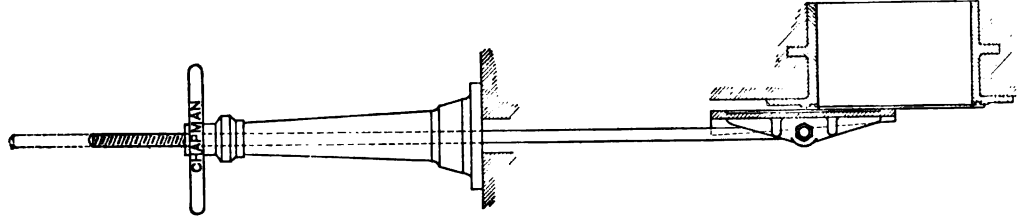


FIG. 398



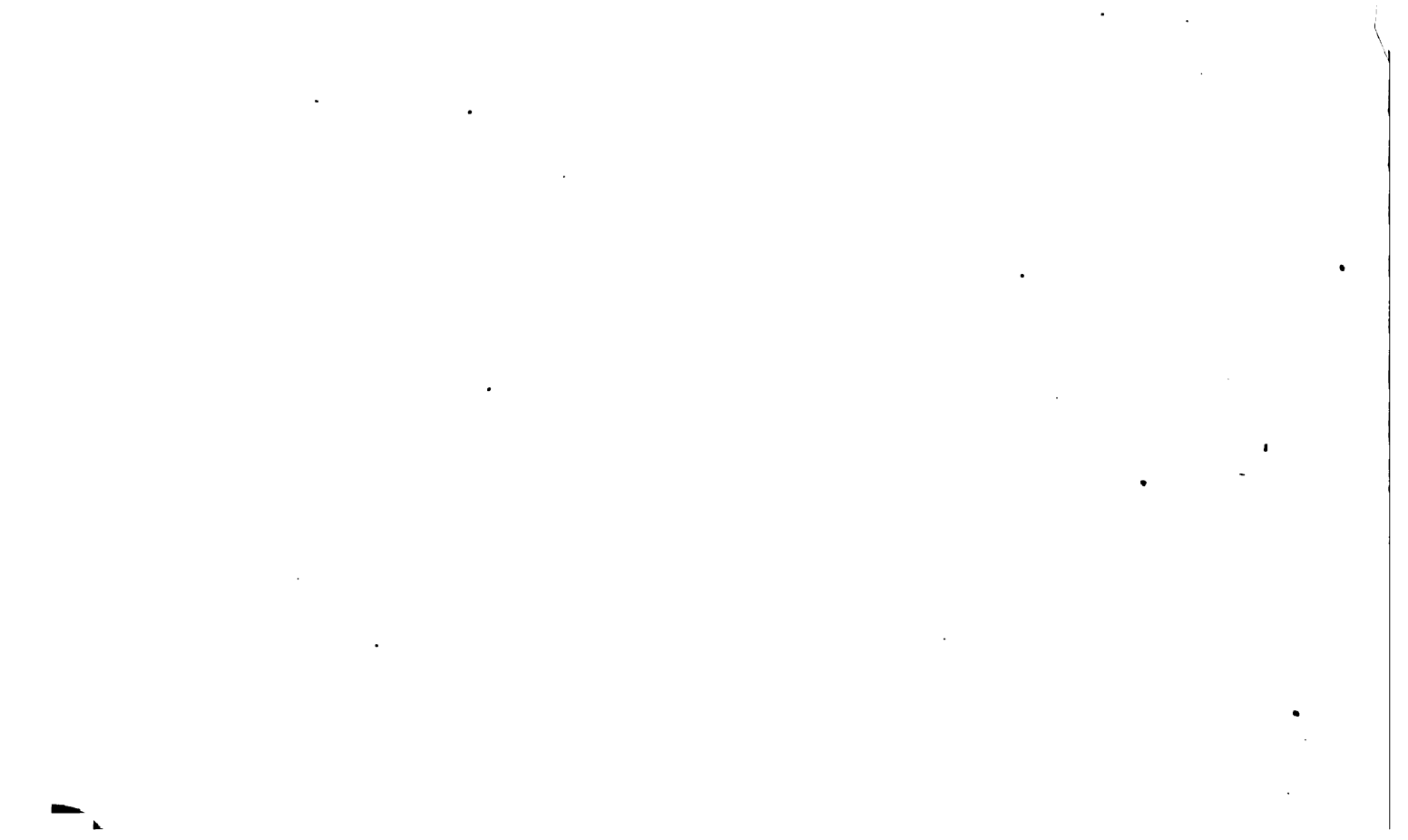
CHAPMAN SLUICE GATES



SPIGOT END

FIG. 399







## SECTION IX.

### INSTRUCTIONS FOR ORDERING

CHAPMAN

VALVES, FLANGES, FLOOR STANDS AND HYDRANTS




## INSTRUCTIONS FOR ORDERING

---


To avoid delay or misunderstanding in ordering or asking for quotations we must have the following data.

### VALVES

1. List Number or Type of Valve and Figure Number.
2. Size of Port or Diameter of Opening.
3. Working or Test Pressure.
4. Purpose for which valve is to be used—Water, Steam, Gas, Oil, Ammonia, etc.
5. Inside Screw, Outside Screw or Sliding Stem and Lever.
6. Kind of End Connections—Screw, Flange, Bell, Spigot or Union. (If flange ends, state whether plain or tongued.  
End flanges are always furnished undrilled unless otherwise ordered.)
7. Wheel, Nut or T Head. If nut, give size.
8. With or without Gearing. If geared, state whether bevel or spur gears and whether operated by wheel or nut.
9. Direction to Turn to Open—

  
R

 or 

  
L  
TURN TO RIGHT TO OPEN      TURN TO LEFT TO OPEN
10. With or without By-pass. If angle valve with by-pass, state on which side by-pass is to be placed when valve is viewed from straight end.
11. With or without Indicator and kind of Indicator.
12. If other than regular dimensions or drilling, give full details.


### COMPANION FLANGES


1. List Number or Kind of Flange and Figure Number.
2. Size of Pipe Flange is for.
3. Working or Test Pressure.
4. Drilled or Undrilled.
5. If other than regular dimensions or drilling, give full details.

### FLOOR STANDS

1. Kind of Stand (Stationary Spindle, Stationary Spindle with Indicator, or Rising Spindle) and Figure Number.
2. Painted or Finished all over.
3. Size and Kind of Valve to be operated by stand. (Inside or Outside Screw, and with or without By-Pass.)
4. If complete valve, stand and connection is wanted, give distance A from center of valve port to floor line and give kind of connection wanted. (See Figures 335 to 344 and accompanying text. Style of connection may also be ordered by Figure Number.)

5. Direction to Turn to Open Valve—
 

  
 R  
 TURN TO RIGHT TO OPEN

  
 L  
 TURN TO LEFT TO OPEN
6. If other than regular in any respect, give full details.

### HYDRANTS


1. List Number or Type of Hydrant and Figure Number.
2. Diameter of Valve Port or Inside Diameter of Stand Pipe.
3. Size and kind of Pipe Connection—Bell, Screw or Flange.
4. Length from Pavement Line to Bottom of Inlet Pipe.
5. Number, Size and Kind (plain or independent valve) Hose Nozzles.
6. Number, Size and Kind (plain or independent valve) Steamer Nozzles.
7. ALWAYS SEND GAGE OR DIMENSIONS
 


{
 

Outside Diameter of Thread  
 Diameter at Bottom of Thread  
 Kind of Thread  
 Number of Threads per Inch

 }

 OF HOSE THREAD WANTED.
8. Size and Form (square, pentagon, hexagon or other) of Operating or Rod Nut and Nozzle Cap Nuts.
9. Direction to Turn to Open—
 

  
 R  
 TURN TO RIGHT TO OPEN

  
 L  
 TURN TO LEFT TO OPEN
10. With or without Frost Case.

Customers ordering large quantities of valves for use on the same work will facilitate their work and prevent delay by specifying which valves are required first.

## REPAIRS

---

It frequently occurs that when valves or hydrants are worn from long use or injured in any way, the addition of some new parts or a general overhauling of the valve, or both, will make it as serviceable as when new. This overhauling can be done to the best advantage in our works, where we have skilled workmen and every facility for the repairing and testing of valves and hydrants of the Chapman Valve Manufacturing Company make. We therefore advise that any of our goods needing repairs be shipped direct to our works at Indian Orchard, Mass. (Boston and Albany R. R.). Special and prompt attention is given to this work and our charges are as moderate as is consistent with the service.

To a large extent all parts of our valves are perfectly interchangeable and repairs to minor parts of the valves, such as yokes, wheels, spindles, stuffing-box glands and followers, etc., may frequently be made on the ground, new parts being sent from our works. Whenever possible, in ordering such parts, send the injured part as a sample or give description and sketch with dimensions.

We invite correspondence on this subject.



SECTION X.

## DIMENSION SHEETS

OF ALL

REGULAR LINES OF CHAPMAN GATE VALVES



## DIMENSIONS OF CHAPMAN VALVE MFG. CO. GATE VALVES

### DIMENSIONS GIVEN

For the convenience of engineers, architects, draftsmen and users in general, we give in the following pages the main dimensions of all regular lines of Chapman Gate Valves. These dimension sheets contain all the necessary data for laying out pipe lines, obtaining clearances, etc. and will save much time and correspondence on the part of the user. Much care has been exercised in the compilation and arrangement of these tables and we believe them to be free from errors. ALL DIMENSIONS ARE GIVEN IN INCHES.

### FLANGE ENDS

Wherever such dimensions have been established by us as "standard," or "regular," we have given the diameters, thicknesses and drilling of the end flanges of flange end valves. The flanges of valves in Lists 21, 23, 24, 26, 27, 28, 29, 31, 41, 42 and 45 correspond in diameter, bolt circle and drilling to the flange schedule adopted by the joint committee of the American Society of Mechanical Engineers and the National Association of Master Steam Fitters.



On and after January 1, 1900, these dimensions will be considered as our standard and unless otherwise specified, valves in these lists will be furnished with such flanges.

Valves with flanges of any other dimensions will be furnished if required.

### DRILLING

In all cases, the Chapman regular drilling is "two up" or "two top bolts" as shown in the accompanying sketch; *i. e.*, the center line of the valve spindle bisects the space between the top pair of bolts, irrespective of the number of bolts. This standard has been adopted by the leading manufacturers of valves and pipe fittings.

SCREW  
ENDS

Screw end valves are recessed behind the thread to prevent the pipe from bottoming and have AMERICAN OR BRIGG'S STANDARD PIPE THREADS unless otherwise ordered; ENGLISH THREADS furnished when required.

SPECIAL  
DIMENSIONS

Users will find it economical to conform to our regular dimensions and drilling wherever possible. In many cases a slight change from the regular pattern will make a material addition to the cost and possibly delay the time of shipment. Such changes usually require more or less special pattern work and destroy the advantage ordinarily gained by the use of the special machinery, jigs, templates, drill heads, etc., with which our work is done. We are of course prepared to make slight changes in our patterns or to make special valves at the lowest price consistent with the work.



DIMENSIONS OF BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER  
SOLID BRONZE SEATS 125 LBS. WORKING PRESSURE

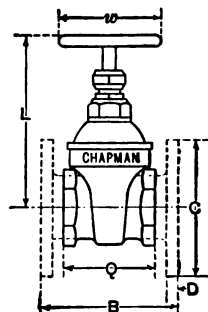


FIG. 500

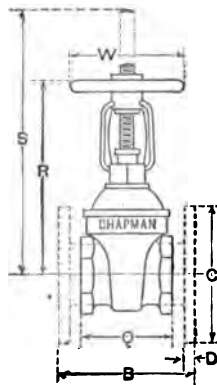


FIG. 501

DIAMETER OF PORT		1	2	3	4	5	6	8	10	12	14	16	18	20	24	30	36	48	60	72	96	120	144	180	240
Q	Length Screw End Valve	11 $\frac{1}{8}$	11 $\frac{1}{2}$	21 $\frac{1}{8}$	2 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$	7 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{2}$	11 $\frac{1}{2}$	12 $\frac{1}{2}$	13 $\frac{1}{2}$	14 $\frac{1}{2}$	15 $\frac{1}{2}$	16 $\frac{1}{2}$	17 $\frac{1}{2}$	18 $\frac{1}{2}$	19 $\frac{1}{2}$
B	Length Flange End Valve						31 $\frac{1}{8}$	41 $\frac{5}{8}$	51	5 $\frac{1}{2}$	7	8 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{2}$	11 $\frac{1}{2}$	12 $\frac{1}{2}$	13 $\frac{1}{2}$	14 $\frac{1}{2}$	15 $\frac{1}{2}$	16 $\frac{1}{2}$	17 $\frac{1}{2}$	18 $\frac{1}{2}$	19 $\frac{1}{2}$	20 $\frac{1}{2}$	21 $\frac{1}{2}$
C	Diameter of End Flanges			3	3	4	4 $\frac{1}{2}$	5	6	7	7	8 $\frac{1}{2}$	9	10	11	12	13	14	15	16	17	18	19	20	21
D	Thickness of End Flanges			$\frac{3}{16}$	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
L	Height to Wheel, Ins. Scr. Valve	31 $\frac{1}{8}$	31 $\frac{1}{2}$	4 $\frac{1}{8}$	5 $\frac{1}{8}$	51 $\frac{1}{8}$	61 $\frac{1}{8}$	61 $\frac{1}{2}$	7 $\frac{1}{8}$	9 $\frac{1}{8}$	10 $\frac{1}{8}$	12 $\frac{1}{8}$	13 $\frac{1}{8}$	14 $\frac{1}{8}$	15 $\frac{1}{8}$	16 $\frac{1}{8}$	17 $\frac{1}{8}$	18 $\frac{1}{8}$	19 $\frac{1}{8}$	20 $\frac{1}{8}$	21 $\frac{1}{8}$	22 $\frac{1}{8}$	23 $\frac{1}{8}$	24 $\frac{1}{8}$	25 $\frac{1}{8}$
w	Diameter of Iron Wheel, " " "			2 $\frac{1}{8}$	2 $\frac{3}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	4	4 $\frac{1}{2}$															
R	Height to Wheel, Outs. Scr. Valve				51 $\frac{1}{8}$	6 $\frac{1}{8}$	6 $\frac{1}{2}$	7 $\frac{1}{8}$	8 $\frac{1}{8}$	10 $\frac{1}{8}$															
S	Height to Spindle when open, " " "				6 $\frac{1}{8}$	71 $\frac{1}{8}$	8 $\frac{1}{8}$	9 $\frac{1}{8}$	11 $\frac{1}{8}$	13 $\frac{1}{8}$															
W	Diameter of Iron Wheel, " " "																								
	No. of Bolts, End Flange Drilling, 2 up						4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Diameter of Bolts, End Flange Drilling						$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	
	Diameter Bolt Circle, End Flange Drilling						3 $\frac{3}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$	7	7	7	7	7	7	7	7	7	7	7	7	7	7

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 1  
CONTINUED

DIMENSIONS OF BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER  
SOLID BRONZE SEATS 125 LBS. WORKING PRESSURE

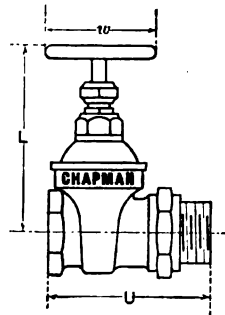


FIG. 502

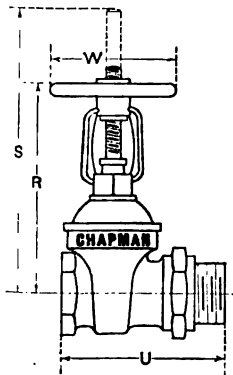


FIG. 503

DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
U	Length with 1 Screw and 1 Male Union End	$1\frac{1}{8}$	$1\frac{1}{8}$	$3\frac{5}{8}$	$4\frac{3}{8}$	$4\frac{3}{4}$	$5\frac{1}{8}$	$5\frac{1}{2}$	$6\frac{1}{4}$	$7\frac{1}{8}$			
U	Length with 1 Screw and 1 Fem. Union End			$3\frac{5}{8}$	$4\frac{3}{8}$	$4\frac{3}{4}$	$5\frac{1}{8}$	$5\frac{1}{2}$	$6\frac{1}{4}$	$7\frac{1}{8}$			
L	Height to Wheel, Ins. Scr. Valve	$3\frac{1}{8}$	$3\frac{5}{8}$	$4\frac{3}{8}$	$5\frac{1}{8}$	$5\frac{3}{8}$	$6\frac{3}{8}$	$6\frac{1}{2}$	$7\frac{3}{8}$	$9\frac{5}{8}$	$10\frac{3}{4}$	$12\frac{5}{8}$	$13\frac{3}{8}$
W	Diameter of Iron Wheel, " "			$2\frac{1}{2}$	$2\frac{5}{8}$	$3\frac{1}{8}$	$3\frac{1}{2}$	$3\frac{1}{2}$	4	$4\frac{1}{2}$			
R	Height to Wheel, Outs. Scr. Valve				$5\frac{1}{8}$	$6\frac{1}{8}$	$6\frac{1}{2}$	$7\frac{1}{8}$	$8\frac{1}{8}$	$10\frac{3}{8}$			
S	Height to Spindle when open, " "				$6\frac{3}{8}$	$7\frac{1}{8}$	$8\frac{3}{8}$	$9\frac{3}{8}$	$11\frac{5}{8}$	$13\frac{3}{4}$			
W	Diameter of Iron Wheel, " "												

# CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 2

## DIMENSIONS OF BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER

SOLID BRONZE SEATS

125 LBS. WORKING PRESSURE

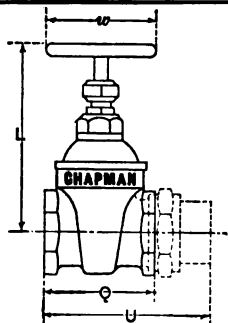


FIG. 504

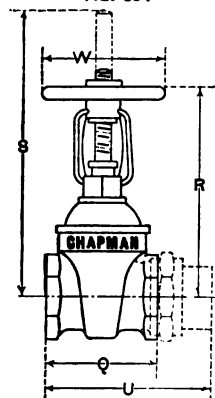


FIG. 505

DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Q	Length Screw End Valve			$2\frac{1}{4}$	$2\frac{3}{8}$	$3\frac{1}{8}$	$3\frac{1}{2}$	$3\frac{7}{8}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$
U	Length with 1 Screw and 1 Male Union End			$3\frac{1}{4}$	$4\frac{3}{8}$	$4\frac{7}{8}$	$5\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{7}{8}$			
U	Length with 1 Screw and 1 Female Union End			$3\frac{1}{4}$	$4\frac{3}{8}$	$4\frac{7}{8}$	$5\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{7}{8}$			
L	Height to Wheel, Ins. Screw Valve	$3\frac{1}{8}$	$3\frac{1}{8}$	$4\frac{3}{8}$	$5\frac{1}{8}$	$5\frac{1}{2}$	$6\frac{1}{8}$	$6\frac{1}{8}$	$7\frac{3}{8}$	$9\frac{1}{8}$	$10\frac{1}{8}$	$12\frac{1}{8}$	$13\frac{1}{8}$
W	Diameter of Iron Wheel, " " "			$2\frac{1}{8}$	$2\frac{3}{8}$	$3\frac{1}{8}$	$3\frac{1}{2}$	$3\frac{1}{2}$	4	$4\frac{1}{2}$			
R	Height to Wheel, Outs. Screw Valve				$5\frac{1}{8}$	$6\frac{1}{8}$	$6\frac{1}{2}$	$7\frac{7}{8}$	$8\frac{1}{8}$	$10\frac{3}{8}$			
S	Height to Spindle when open " " "				$6\frac{3}{8}$	$7\frac{1}{8}$	$8\frac{3}{8}$	$9\frac{3}{8}$	$11\frac{1}{8}$	$13\frac{3}{4}$			
w	Diameter of Iron Wheel, " " "												

For Lengths of Flange End Valves see List No. 1

# CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 3

## DIMENSIONS OF BRONZE BOLT TOP GATE VALVES FOR STEAM AND WATER

SOLID BRONZE SEATS

3½ IN. TO 9 IN.—125 LBS. WORKING PRESSURE

10 IN. TO 13 IN.—75 LBS. WORKING PRESSURE

*DIAMETER OF PORT		3½	4	4½	5	5½	6	7	7½	8	9	10	12
Q	Length Screw End Valve	6½	7	7½	7½	9½	9½	10½	11½	11½			
B	Length Flange End Valve	7½	7½	8½	8½	9½	9½	10½	10½	10½			
C	Diameter of End Flanges	8½	9	9½	10	10½	11	12	12½	13			
D	Thickness of End Flanges	1½	1½	1½	1½	1½	1½	1½	1½	1½			
L	Height to Wheel, Ins. Scr. Valve	12	13	14½	15½	16½	16½	18½	22½	22½			
w	Diameter of Iron Wheel, " " "	6	7	8	8½	10	10	10	12	12			
R	Height to Wheel, Outs. Scr. Valve												
S	Height to Spindle when open, " " "												
W	Diameter of Iron Wheel, " " "												
No. of Bolts, End Flange Drilling, 2 up													
Diameter of Bolts, End Flange Drilling													
Diameter of Bolt Circle, End Flange Drilling													

\* Intermediate and larger sizes furnished if desired

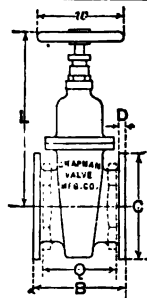


FIG. 506

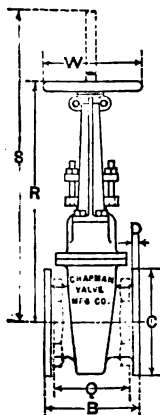


FIG. 507

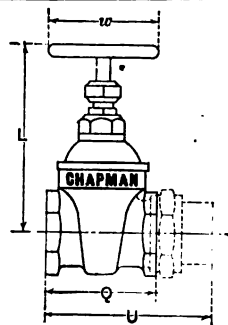


FIG. 808

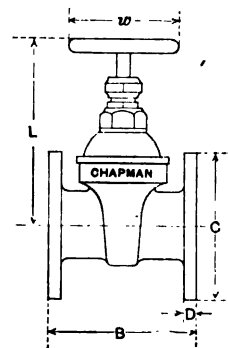


FIG. 809

FORMER TABLE NO. 1

DIMENSIONS OF BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER

SABBITT SEATS

125 LBS. WORKING WATER PRESSURE  
80 LBS. WORKING STEAM PRESSURE  
MAXIMUM TEMPERATURE, 325° FAN.

SOLID BRONZE SEATS

125 LBS. WORKING WATER PRESSURE  
125 LBS. WORKING STEAM PRESSURE

LIST NO. 4

DIAMETER OF PORT		1	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4	3	3 1/2	4
Q	Length Screw End Valve	2 3/8	2 3/4	2 7/8	3	3 1/8	3 1/4	4 1/8	4 3/4	5 1/8	6 1/8
B	Length Flange End Valve	2 1/2	2 1/2	2 9/16	3	3 3/8	3 1/4	4 1/8	5 1/4	5 3/4	7
C	Diameter of End Flanges	2 1/2	2 1/2	3	3	4	4 1/2	5	6	7	8 1/2
D	Thickness of End Flanges	1 3/8	1 3/8	1 3/8	3/4	1	1 1/8	1 1/8	1 3/8	1 3/4	2
U	Length with 1 Screw and 1 Male Union End	3 1/8	3 1/8	3 1/2	4 1/8	5 1/8	5 1/4	5 1/2	6 1/4	7 1/4	
U	Length with 1 Screw and 1 Fem. Union End	3 1/8	3 1/8	3 1/2	4 1/8	5 1/8	5 1/4	5 1/2	6 1/4	7 1/4	
L	Height to Wheel, Ins. Scr. Valve	3 1/8	3 1/4	4 1/2	5	5 1/2	6 1/2	7	8 1/2	9 1/2	11
w	Diameter of Iron Wheel	2 1/4	2 1/4	2 3/8	3 1/4	3 1/2	3 3/4	4	4 1/2	5	6
No. of Bolts, End Flange Drilling,		2 up					4	4	4	5	5
Dia. of Bolts, End Flange Drilling							7/16	1/2	1/2	1/2	5/8
Dia. Bolt Circle, End Flange Drilling							3 3/8	3 1/2	4 1/2	5 1/2	7

# CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 20

LIST NO. 5

## DIMENSIONS OF BRONZE SCREW TOP ANGLE GATE VALVES FOR STEAM AND WATER

### BABBITT SEATS

125 LBS. WORKING WATER PRESSURE  
80 LBS. WORKING STEAM PRESSURE  
MAXIMUM TEMPERATURE 325° FAH.

### SOLID BRONZE SEATS

SIZES 1½ IN. AND LARGER  
125 LBS. WORKING WATER PRESSURE  
125 LBS. WORKING STEAM PRESSURE

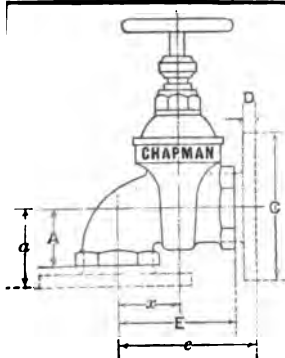


FIG. 510

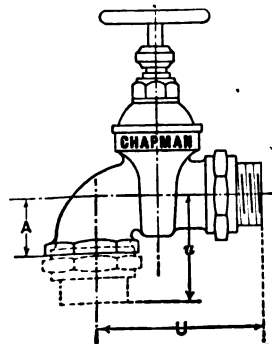


FIG. 511

DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4
A	Cen. to Face of Angle End, Scr. End Valve	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{5}{8}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	2 $\frac{3}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$		
E	" " Straight " , " "	1 $\frac{1}{8}$	1 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{8}$	4 $\frac{1}{8}$	5 $\frac{7}{8}$	6 $\frac{1}{8}$		
a	" " Angle " , Flg. End Valve												
e	" " Straight " , " "												
C	Diameter of End Flanges	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3	3	4	4 $\frac{1}{2}$	5	6	7	7	8 $\frac{1}{2}$	9
D	Thickness of End Flanges	1 $\frac{3}{8}$	1 $\frac{3}{8}$	1 $\frac{3}{8}$	1 $\frac{7}{8}$	1	1 $\frac{3}{8}$	1 $\frac{5}{8}$	1 $\frac{3}{4}$	1 $\frac{7}{8}$	1 $\frac{5}{4}$	1 $\frac{7}{4}$	1 $\frac{9}{8}$
U	Center to Face of Straight End with Union	2 $\frac{1}{8}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$	4 $\frac{3}{8}$	4 $\frac{3}{8}$	5 $\frac{1}{8}$	5 $\frac{3}{8}$	6 $\frac{1}{8}$	7 $\frac{1}{8}$			
u	" " Angle " " "												
x	Center of Angle End to Center of Spindle	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{3}{8}$	1 $\frac{1}{4}$	1 $\frac{1}{4}$	1 $\frac{3}{8}$	2 $\frac{1}{8}$	2 $\frac{7}{8}$	2 $\frac{1}{8}$		
L	Height to Wheel, Ins. Scr. Valve	3 $\frac{1}{8}$	3 $\frac{1}{8}$	4 $\frac{1}{8}$	5	5 $\frac{1}{8}$	6 $\frac{1}{8}$	7	8 $\frac{1}{8}$	9 $\frac{1}{8}$	11	12 $\frac{1}{8}$	13 $\frac{1}{8}$
w	Diameter of Iron Wheel, " " "	2 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{5}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	4	4 $\frac{1}{2}$	5	6	7 $\frac{1}{4}$	8 $\frac{1}{2}$
No. of Bolts, End Flange Drilling, 2 up							4	4	4	5	5	5	5
Diam. of Bolts, " " "							1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$
Diam. Bolt Circle, " " "							3 $\frac{1}{8}$	3 $\frac{1}{8}$	4 $\frac{1}{8}$	5 $\frac{1}{8}$	5 $\frac{1}{8}$	7	7 $\frac{1}{8}$

## DIMENSIONS OF BRONZE SCREW TOP CORNER VALVES FOR STEAM AND WATER

## SABBITT SEATS

125 LBS. WORKING WATER PRESSURE

80 LBS. WORKING STEAM PRESSURE

MAXIMUM TEMPERATURE, 325° FAH.

## SOLID BRONZE SEATS

SIZES 1½ IN. AND LARGER

125 LBS. WORKING WATER PRESSURE

125 LBS. WORKING STEAM PRESSURE

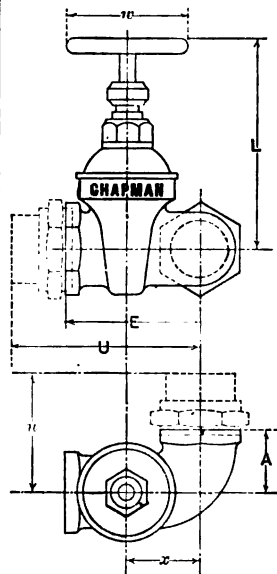


FIG 512

DIAMETER OF PORT		½	¾	1	1½	2	2½
A	Center of Straight End to Face of Angle End	1 3/8	1 5/8	1 7/8	1 9/8	2 1/8	2 3/8
E	“ Angle “ “ Straight End	2 1/8	2 3/8	3	3 1/4	3 3/4	4 1/8
U	Center of Angle End to Center of Straight End with Union		4 3/8	4 1/2	5 1/8	5 1/4	
u	“ Straight “ “ Angle “ “						
x	“ Angle End to Center of Spindle	1 5/8	1 7/8	1 9/8	1 11/8	1 13/8	2 1/8
L	Height to Wheel	4 1/2	5	5 5/8	6 1/2	7	8 1/8
w	Diameter of Iron Wheel	2 5/8	3 1/8	3 1/2	3 3/4	4	4 1/2

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 7

DIMENSIONS OF BRONZE SCREW TOP HOSE VALVES FOR STEAM AND WATER

SOLID BRONZE SEATS

175 LBS. WORKING WATER PRESSURE

125 LBS. WORKING STEAM PRESSURE

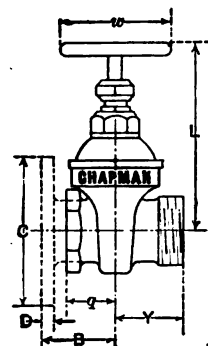


FIG. 513

DIAMETER OF PORT		$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
q	Center of Spindle to Face of Pipe End, Scr. End Valve	$1\frac{3}{8}$	$1\frac{7}{8}$	$1\frac{9}{8}$	$1\frac{1}{2}$	2	$2\frac{1}{8}$	$2\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{1}{2}$
B	Center of Spindle to Face of Pipe End, Flg. End Valve			$1\frac{3}{4}$	$2\frac{5}{8}$	$2\frac{3}{8}$	$2\frac{7}{8}$	$3\frac{1}{2}$	$4\frac{1}{8}$	$4\frac{7}{8}$
Y	Center of Spindle to Face of Hose End	$1\frac{1}{2}$	$1\frac{5}{8}$	$2\frac{3}{8}$	$2\frac{5}{8}$	$2\frac{1}{8}$	3	$3\frac{1}{8}$	$4\frac{3}{8}$	$4\frac{9}{8}$
C	Diameter of Flange on Pipe End	3	4	$4\frac{1}{2}$	5	6	7	7	$8\frac{1}{2}$	9
D	Thickness of Flange on Pipe End	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
L	Height to Wheel									
w	Diameter of Iron Wheel	$2\frac{3}{8}$	$3\frac{1}{8}$	$3\frac{1}{2}$	$3\frac{1}{2}$	4	$4\frac{1}{2}$			
No. of Bolts, End Flange Drilling, 2 up				4	4	4	5	5	5	5
Diameter of Bolts, End Flange Drilling				$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$
Diameter of Bolt Circle, End Flange Drilling				$3\frac{3}{8}$	$3\frac{3}{8}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$5\frac{1}{2}$	7	$7\frac{3}{8}$
Outside Diam., Thread, Hose End		$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$2\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{3}{8}$		
Diam. Bottom of Thread, " "		$\frac{3}{4}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{3}{8}$	$3\frac{1}{8}$		
No. Threads per Inch " "		11	11	11	11	$7\frac{1}{2}$	7	7		



FORMER TABLE NO. 2

## DIMENSIONS OF BRONZE SCREW TOP HOSE VALVES

LIST NO. 8

SABBITT OR SOLID BRONZE SEATS

125 LBS. WORKING PRESSURE

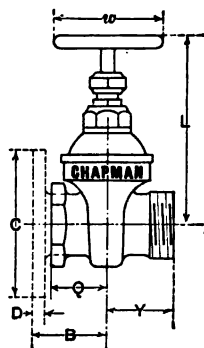


FIG. 814

DIAMETER OF PORT		$\frac{1}{2}$	1	$1\frac{1}{2}$	$2\frac{1}{2}$	3	$4\frac{1}{2}$	6	8
Q	Center of Spindle to Face of Pipe End, Screw End Valve	$1\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{1}{8}$	$2\frac{3}{8}$	$3\frac{1}{8}$	$4\frac{1}{8}$	$4\frac{1}{2}$
B	Center of Spindle to Face of Pipe End, Flange End Valve	$1\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{5}{8}$	$2\frac{1}{4}$	$2\frac{3}{4}$	$3\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{3}{4}$
Y	Center of Spindle to Face of Hose End	$1\frac{1}{8}$	2	$2\frac{1}{8}$	$2\frac{1}{4}$	$3\frac{1}{8}$	$3\frac{3}{8}$	$4\frac{1}{8}$	$4\frac{1}{2}$
C	Diameter of Flange on Pipe End	3	4	$4\frac{1}{2}$	5	6	7	8	9
D	Thickness of Flange on Pipe End	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
L	Height to Wheel	5	$5\frac{1}{2}$	$6\frac{1}{2}$	7	$8\frac{1}{2}$	$9\frac{1}{2}$	11	$12\frac{1}{2}$
w	Diameter of Iron Wheel	$3\frac{1}{8}$	$3\frac{1}{2}$	$3\frac{3}{4}$	4	$4\frac{1}{2}$	5	6	$7\frac{1}{2}$
No. of Bolts, End Flange Drilling,		2 up		4	4	5	5	5	5
Diameter of Bolts, End Flange Drilling				$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$
Diameter Bolt Circle, End Flange Drilling				$3\frac{1}{8}$	$3\frac{3}{8}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$5\frac{1}{2}$	$7\frac{1}{2}$
Outside Diameter Thread, Hose End		$1\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{3}{8}$	
Diameter Bottom of Thread, " "		$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{3}{4}$	$2\frac{1}{4}$	$2\frac{3}{4}$	$3\frac{1}{4}$	
No. Threads per Inch, " "		11	11	11	11	$7\frac{1}{2}$	7	7	

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 3

DIMENSIONS OF BRONZE SCREW TOP AUTOMATIC DRIP GATE VALVES

300 BABBITT METAL SEATS

125 LBS. WORKING PRESSURE

LIST NO. 9

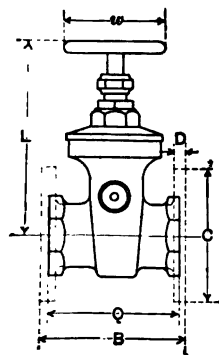


FIG. 515

DIAMETER OF PORT		$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
Q	Length Screw End Valve	$2\frac{1}{8}$	$3\frac{1}{8}$	$2\frac{1}{4}$	$4\frac{1}{8}$	$4\frac{1}{4}$
B	Length Flange End Valve	3	$3\frac{1}{8}$	$3\frac{1}{4}$	$4\frac{1}{8}$	$5\frac{1}{4}$
C	Diameter of End Flanges	3	4	$4\frac{1}{2}$	5	6
D	Thickness of End Flanges	$\frac{7}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{5}{16}$	$\frac{3}{8}$
L	Height to Wheel, Ins. Scr. Valve	5	$5\frac{1}{8}$	$6\frac{1}{4}$	7	$8\frac{1}{8}$
w	Diameter of Iron Wheel, " " "	$3\frac{1}{8}$	$3\frac{1}{2}$	$3\frac{3}{4}$	4	$4\frac{1}{2}$
No. of Bolts, End Flange Drilling, 2 up				4	4	4
Diameter of Bolts, End Flange Drilling				$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{2}$
Diameter Bolt Circle, End Flange Drilling				$3\frac{3}{8}$	$3\frac{1}{8}$	$4\frac{1}{2}$

**DIMENSIONS OF HEAVY BRONZE SCREW TOP GATE VALVES FOR STEAM AND WATER**

**SOLID BRONZE SEATS**

**250 LBS. WORKING PRESSURE**

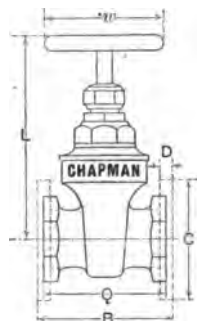


FIG. 516

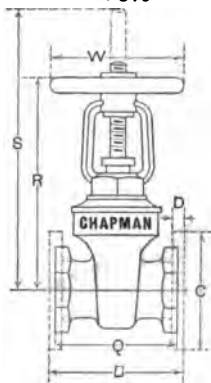


FIG. 517

DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Q	Length Screw End Valve	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{15}{16}$	$3\frac{5}{8}$	4	$4\frac{5}{8}$	$5\frac{3}{16}$	6	$6\frac{5}{8}$	$7\frac{1}{2}$
B	Length Flange End Valve	$2\frac{3}{8}$	$2\frac{3}{4}$	$2\frac{15}{8}$	4	$4\frac{1}{2}$	$5\frac{3}{8}$	$5\frac{7}{8}$	$6\frac{1}{2}$	$7\frac{1}{4}$	$7\frac{1}{2}$
C	Diameter of End Flanges	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3	4	$4\frac{1}{2}$	5	6	7	7
D	Thickness of End Flanges	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{11}{16}$	$\frac{1}{2}$
L	Height to Wheel, Ins. Scr. Valve	5	5	$5\frac{3}{8}$	$6\frac{1}{8}$	7	$7\frac{1}{8}$	$8\frac{7}{8}$	$9\frac{1}{8}$	$10\frac{1}{8}$	12
w	Diameter of Iron Wheel, " " "	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{11}{16}$	4	$4\frac{1}{2}$	$4\frac{1}{2}$	5	6	7	7
R	Height to Wheel, Outs. Scr. Valve	$4\frac{1}{8}$	$4\frac{1}{8}$	$5\frac{1}{4}$	$6\frac{1}{8}$	$7\frac{1}{8}$	8	9	$10\frac{1}{8}$	$12\frac{1}{8}$	$14\frac{1}{8}$
S	Height to Spindle when open, " " "	$5\frac{1}{8}$	$5\frac{1}{8}$	$6\frac{1}{8}$	$7\frac{1}{8}$	$8\frac{1}{8}$	10	$11\frac{1}{8}$	$13\frac{1}{8}$	$15\frac{1}{8}$	$18\frac{1}{8}$
W	Diameter of Iron Wheel, " " "	$3\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{11}{16}$	4	$4\frac{1}{2}$	$4\frac{1}{2}$	5	6	7	8
No. of Bolts, End Flange Drilling, 2 up		4	4	4	4	4	4	4	4	5	5
Diameter of Bolts, End Flange Drilling		$\frac{3}{8}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{3}{4}$
Diameter Bolt Circle, End Flange Drilling		$1\frac{1}{4}$	$1\frac{1}{4}$	$2\frac{1}{8}$	$2\frac{1}{8}$	3	$3\frac{3}{8}$	$3\frac{7}{8}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$5\frac{1}{2}$

## DIMENSIONS OF HEAVY BRONZE BOLT TOP GATE VALVES FOR STEAM AND WATER

## SOLID BRONZE SEATS

3½ IN. TO 9 IN.—175 LBS. WORKING WATER PRESSURE

10 IN. TO 13 IN.—150 LBS. WORKING WATER PRESSURE

3½ IN. TO 6 IN.—150 LBS. WORKING STEAM PRESSURE

7 IN. TO 13 IN.—MADE SPECIAL FOR HIGH PRESSURE STEAM

## \* DIAMETER OF PORT

2½ 3 3½ 4 4½ 5 6 7 8 9 10 12

Q	Length Screw End Valve												
B	Length Flange End Valve					9½		11½					
C	Diameter of End Flanges	7	7	8½	9	9½	10	11	12	13			
D	Thickness of End Flanges												
L	Height to Wheel, Ins. Scr. Valve												
w	Diameter of Iron Wheel, " " "												
R	Height to Wheel, Outs. Scr. Valve												
S	Height to Spindle when open, " " "												
W	Diameter of Iron Wheel, " " "												
No. of Bolts, End Flange Drilling,		2 up											
Diameter of Bolts, End Flange Drilling													
Diameter of Bolt Circle, End Flange Drilling													

\* Intermediate and larger sizes furnished if desired

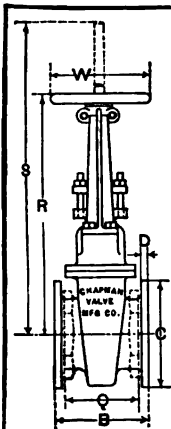


FIG. 518

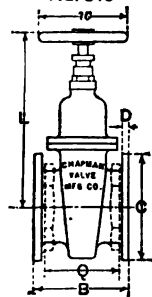


FIG. 519

CHAPMAN VALVE MANUFACTURING CO.

**DIMENSIONS OF HEAVY BRONZE ANGLE GATE VALVES FOR STEAM AND WATER**  
SOLID BRONZE SEATS 250 LBS. WORKING PRESSURE

LIST No. 13

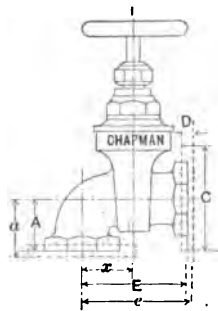


FIG. 520

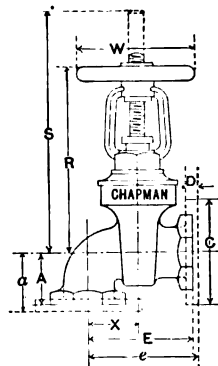


FIG. 521

DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3
A	Center to Face of Angle End, Screw End Valve						2 $\frac{5}{16}$	2 $\frac{3}{8}$	3 $\frac{1}{8}$		
E	" " Straight " " " "						4 $\frac{3}{8}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$		
a	" " Angle " Flg. End Valve										
e	" " Straight " " " "										
C	Diameter of End Flanges	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3	3	4	4 $\frac{1}{2}$	5	6	7	7
D	Thickness of End Flanges	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{7}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{11}{16}$	$\frac{1}{2}$
x	Center of Angle End to Center of Spindle					2 $\frac{1}{8}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$			
L	Height to Wheel, Ins. Scr. Valve	5	5	5 $\frac{5}{8}$	6 $\frac{1}{8}$	7	7 $\frac{9}{16}$	8 $\frac{7}{16}$	9 $\frac{11}{16}$	10 $\frac{13}{16}$	12
w	Diameter of Iron Wheel, " " "	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{11}{16}$	4	4 $\frac{1}{2}$	4 $\frac{1}{2}$	5	6	7	7
R	Height to Wheel, Outs. Scr. Valve	4 $\frac{11}{16}$	4 $\frac{11}{16}$	5 $\frac{1}{2}$	6 $\frac{3}{16}$	7 $\frac{1}{8}$	8	9	10 $\frac{3}{8}$	12 $\frac{1}{8}$	14 $\frac{1}{8}$
S	Height to Spindle when open, " " "	5 $\frac{1}{8}$	5 $\frac{1}{8}$	6 $\frac{5}{16}$	7 $\frac{11}{16}$	8 $\frac{7}{8}$	10	11 $\frac{3}{8}$	13 $\frac{1}{4}$	15 $\frac{1}{2}$	18 $\frac{1}{2}$
W	Diameter of Iron Wheel, " " "	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{11}{16}$	4	4 $\frac{1}{2}$	4 $\frac{1}{2}$	5	6	7	8
No. of Bolts, End Flange Drilling, 2 up		4	4	4	4	4	4	4	4	5	5
Diameter of Bolts, End Flange Drilling		$\frac{3}{8}$	$\frac{3}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$
Diameter Bolt Circle, End Flange Drilling		1 $\frac{1}{4}$	1 $\frac{1}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$	3	3 $\frac{3}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 14

DIMENSIONS OF EXTRA HEAVY BRONZE GATE VALVES FOR WATER

BABBITT OR SOLID BRONZE SEATS

MAXIMUM TEMPERATURE FOR BABBITT SEATS, 325° FAN.

1/2 IN. TO 2 IN.—1000 LBS. WORKING PRESSURE

2 1/2 IN. TO 4 IN.—800 LBS. WORKING PRESSURE

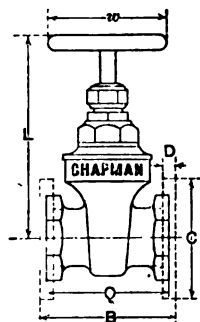


FIG. 522

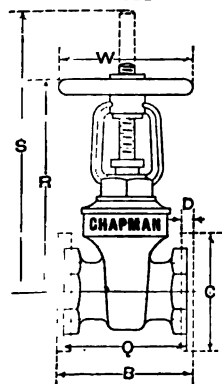


FIG. 523

		SCREW TOP AS PER CUT							BOLT TOP				
* DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4
Q	Length Screw End Valve	3 $\frac{1}{8}$	3 $\frac{3}{8}$	3 $\frac{11}{16}$	4 $\frac{3}{8}$	4 $\frac{15}{16}$	5 $\frac{1}{2}$	6	7	8 $\frac{3}{8}$	9 $\frac{11}{16}$	9 $\frac{7}{8}$	10
B	Length Flange End Valve	3 $\frac{3}{4}$	3 $\frac{3}{4}$	4 $\frac{1}{4}$	5	5 $\frac{5}{8}$	6 $\frac{1}{8}$	6 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	11 $\frac{1}{8}$	11 $\frac{1}{4}$	12
C	Diameter of End Flanges	3	3	3	4	4 $\frac{1}{2}$	5	6	6 $\frac{1}{2}$	7	8	8 $\frac{1}{2}$	9
D	Thickness of End Flanges	1 $\frac{7}{8}$	1 $\frac{7}{8}$	2	2 $\frac{1}{8}$	2 $\frac{3}{8}$	3	3 $\frac{1}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{8}$	4 $\frac{1}{4}$	4 $\frac{3}{4}$	5
L	Height to Wheel, Ins. Scr. Valve	5 $\frac{1}{4}$	5 $\frac{1}{4}$	6 $\frac{3}{16}$	7 $\frac{3}{16}$	7 $\frac{7}{8}$	8 $\frac{9}{16}$	9 $\frac{1}{4}$	10 $\frac{1}{16}$	12 $\frac{5}{16}$	13 $\frac{3}{16}$	13 $\frac{3}{4}$	15 $\frac{1}{16}$
w	Diameter of Iron Wheel, " " "	3 $\frac{1}{2}$	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5	5	6	7	8 $\frac{1}{2}$	10	10	12
R	Height to Wheel, Outs. Scr. Valve				6 $\frac{5}{16}$	7 $\frac{3}{8}$	8 $\frac{1}{16}$	9	10 $\frac{5}{16}$	13 $\frac{5}{16}$	15 $\frac{1}{8}$	16 $\frac{1}{16}$	18
S	Height to Spindle when open " " "				7 $\frac{5}{8}$	9	10 $\frac{3}{16}$	11 $\frac{1}{2}$	13 $\frac{1}{2}$	15 $\frac{3}{4}$	19 $\frac{3}{4}$	21 $\frac{7}{16}$	23 $\frac{5}{16}$
W	Diameter of Iron Wheel, " " "				4 $\frac{1}{2}$	5	5	6	7	10	10	12	12
No. of Bolts, End Flange Drilling, 2 up				4	4	4	4	4	5	6	6	7	8
Diameter of Bolts, End Flange Drilling				1 $\frac{7}{8}$	2	2	2	2 $\frac{5}{8}$	3	3	3	3	3
Diameter Bolt Circle, End Flange Drilling				2 $\frac{1}{8}$	2 $\frac{1}{8}$	3 $\frac{1}{4}$	3 $\frac{1}{4}$	4 $\frac{1}{2}$	5	5 $\frac{1}{4}$	6 $\frac{1}{4}$	6 $\frac{3}{4}$	7 $\frac{1}{2}$

\* Larger sizes furnished if desired

# CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 15

## DIMENSIONS OF EXTRA HEAVY BRONZE ANGLE GATE VALVES FOR WATER

SABBITT OR SOLID BRONZE SEATS

MAXIMUM TEMPERATURE FOR SABBITT SEATS, 325° FAN.

$\frac{1}{2}$  IN. TO 2 IN.—1000 LBS. WORKING PRESSURE

2 $\frac{1}{2}$  IN. TO 4 IN.—900 LBS. WORKING PRESSURE

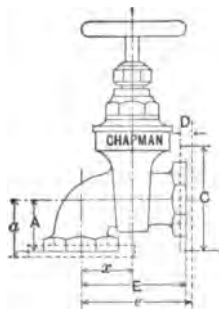


FIG. 824

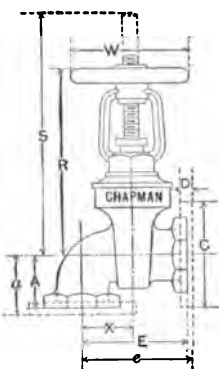


FIG. 825

		SCREW TOP AS PER CUT								BOLT TOP			
DIAMETER OF PORT*		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4
A	Center to Face of Angle End, Scr. End V.			1 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{8}$	4 $\frac{1}{2}$	5 $\frac{1}{8}$	6
E	" " " " Straight " " " "			3 $\frac{1}{8}$	3 $\frac{3}{8}$	4 $\frac{1}{8}$	4 $\frac{3}{8}$	5 $\frac{1}{8}$	6 $\frac{1}{8}$	7 $\frac{1}{8}$	9 $\frac{3}{8}$	10 $\frac{3}{8}$	10 $\frac{1}{2}$
a	" " " " Angle " Flg. " "			2	2 $\frac{1}{8}$	2 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{8}$	4 $\frac{1}{2}$	5 $\frac{1}{8}$	6
e	" " " " Straight " " " "			3 $\frac{3}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{8}$	4 $\frac{3}{8}$	5 $\frac{1}{8}$	7 $\frac{1}{8}$	8 $\frac{1}{8}$	10	11 $\frac{1}{8}$	11 $\frac{1}{2}$
C	Diameter of End Flanges	3	3	3	4	4 $\frac{1}{2}$	5	6	6 $\frac{1}{2}$	7	8	8 $\frac{1}{2}$	9
D	Thickness of End Flanges	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{9}{8}$	$\frac{11}{8}$	$\frac{5}{4}$	$\frac{11}{8}$	$\frac{11}{8}$	$\frac{11}{8}$	1 $\frac{1}{8}$	1 $\frac{3}{8}$	1 $\frac{1}{2}$
x	Center of Angle End to Center of Spindle			1 $\frac{1}{4}$	1 $\frac{3}{8}$	1 $\frac{1}{2}$	2	2 $\frac{1}{4}$	3 $\frac{1}{8}$	3 $\frac{1}{4}$	4 $\frac{1}{8}$	5 $\frac{1}{8}$	5 $\frac{1}{2}$
L	Height to Wheel, Ins. Scr. Valve	5 $\frac{1}{4}$	5 $\frac{1}{4}$	6 $\frac{3}{8}$	7 $\frac{3}{8}$	7 $\frac{1}{2}$	8 $\frac{3}{8}$	9 $\frac{1}{4}$	10 $\frac{1}{8}$	12 $\frac{1}{8}$	13 $\frac{3}{8}$	13 $\frac{1}{2}$	15 $\frac{1}{2}$
w	Diameter of Iron Wheel, " " "	3 $\frac{1}{2}$	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5	5	6	7	8 $\frac{1}{2}$	10	10	12
R	Height to Wheel, Outs. Scr. V.				6 $\frac{1}{8}$	7 $\frac{1}{8}$	8 $\frac{1}{8}$	9	10 $\frac{1}{8}$	13 $\frac{1}{8}$	15 $\frac{1}{8}$	16 $\frac{1}{8}$	18
S	Height to Spindle when open, " " "				7 $\frac{1}{8}$	9	10 $\frac{1}{8}$	11 $\frac{1}{2}$	13 $\frac{1}{2}$	15 $\frac{1}{2}$	19 $\frac{1}{2}$	21 $\frac{1}{2}$	23 $\frac{1}{2}$
W	Diameter of Iron Wheel, " " "				4 $\frac{1}{2}$	5	5	6	7	10	10	12	12
No. of Bolts, End Flange Drilling, 2 up				4	4	4	4	4	5	6	6	7	8
Diameter of Bolts, End Flange Drilling				$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{2}$
Diameter Bolt Circle, End Flange Drilling				2 $\frac{1}{8}$	2 $\frac{1}{8}$	3 $\frac{1}{4}$	3 $\frac{1}{4}$	4 $\frac{1}{2}$	5	5 $\frac{1}{4}$	6 $\frac{1}{4}$	6 $\frac{1}{4}$	7 $\frac{1}{4}$

\*Larger sizes furnished if desired

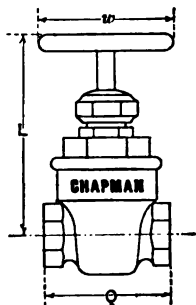


FIG. 526

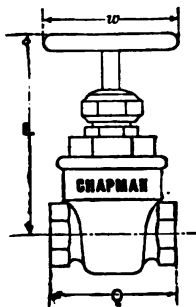


FIG. 527

LIST NO. 16

DIMENSIONS OF DOUBLE EXTRA HEAVY BRONZE SCREW TOP GATE VALVES FOR WATER

SABITT METAL SEATS

2000 LBS. WORKING PRESSURE

DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
Q	Length Screw End Valve	$4\frac{5}{16}$	$4\frac{5}{16}$	5	$5\frac{1}{2}$	6	$6\frac{3}{8}$	$7\frac{1}{4}$	
	Length Flange End Valve*								
L	Height to Wheel, Ins. Scr. Valve	$7\frac{7}{16}$	$7\frac{7}{16}$	$8\frac{1}{2}$	$8\frac{13}{16}$	$9\frac{11}{16}$	$10\frac{5}{8}$	$11\frac{5}{8}$	
w	Diameter of Iron Wheel, " " "	$4\frac{1}{2}$	$4\frac{1}{2}$	5	6	7	8	10	

\* Shape, Dimensions and Drilling of End Flanges to suit Purchaser

LIST NO. 17

DIMENSIONS OF SPECIAL EXTRA HEAVY BRONZE SCREW TOP GATE VALVES FOR WATER

SABITT METAL SEATS

6000 LBS. WORKING PRESSURE

DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
Q	Length Screw End Valve				$6\frac{1}{4}$	7	$7\frac{1}{4}$	8	
	Length Flange End Valve*								
L	Height to Wheel, Ins. Scr. Valve				$9\frac{1}{4}$	$10\frac{3}{8}$	11	$12\frac{3}{8}$	
w	Diameter of Iron Wheel " " "				8	$8\frac{1}{2}$	$8\frac{1}{2}$	$11\frac{1}{2}$	

\* Shape, Dimensions and Drilling of End Flanges to suit Purchaser



## DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

MAXIMUM TEMPERATURE, 325° FAH.

2½ IN. TO 10 IN.—180 LBS. WORKING WATER PRESSURE 12 IN. AND 14 IN.—75 LBS. WORKING WATER PRESSURE

2½ IN. TO 14 IN.—EXHAUST AND LOW PRESSURE STEAM

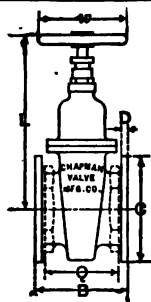


FIG. 840

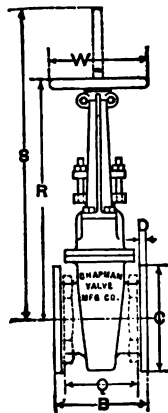


FIG. 841

DIAMETER OF PORT		2½	3	3½	4	4½	5	6	7	8	9	10	12	14
Q	Length Screw End Valve	6½	8	8½	9½	9½	9½	10½	11½	12	12½			
B	Length Flg. End Valve without By-Pass	7½	8½	8½	9½	9½	9½	10½	10½	10½	11½	12½	12½	14
	Length Flange End Valve with By-Pass													
C	Diameter of End Flanges	7	7½	8½	9	9½	10	11	12½	13½	15	16	19	21
D	Thickness of End Flanges	1½	1½	1½	2	2	2	1½	1½	1½	1½	1	1½	1½
L	Height to Wheel, Ins. Scr. Valve	10½	11½	12½	13½	15½	16	17½	22½	21½	26½	26½	30½	34½
w	Diameter of Wheel, " " "	6	7	7	8	8½	8½	10	12	13	14	14	15	16
R	Height to Wheel, Outs. Scr. Valve		14½		17½		20½	23½	28½	30½	35½	37½	43½	49½
S	Height to Spindle when open, " "		18½		23½		27½	31½	37½	40½	46½	49½	57½	65½
W	Diameter of Wheel, " "	8	8½	10	10	12	12	13	14	15	15	16	18	20
	Size of By-Pass Valve													
	No. of Bolts, End Flange Drilling, 2 up	4	4	4	4	8	8	8	8	8	12	12	12	12
	Diam. of Bolts, End Flange Drilling	½	½	½	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾
	Diam. Bolt Circle, End Flange Drilling	5½	6	7	7½	7½	8½	9½	10½	11½	13½	14½	17	18½

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 21  
CONTINUED

DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

MAXIMUM TEMPERATURE, 325° F.M.

15 IN. TO 20 IN.—75 LBS. WORKING WATER PRESSURE

22 IN. TO 48 IN.—80 LBS. WORKING WATER PRESSURE

15 IN. TO 48 IN.—EXHAUST AND LOW PRESSURE STEAM

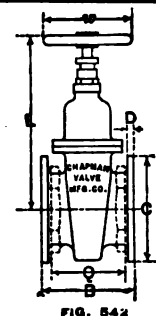


FIG. 542

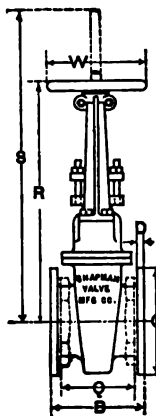


FIG. 543

DIAMETER OF PORT		15	16	18	20	22	24	26	28	30	36	40	42	48
B	Length Flg. End Valve without By-Pass	15 $\frac{1}{8}$	16 $\frac{1}{8}$	18	19	19 $\frac{1}{2}$	20	22		27 $\frac{1}{8}$	29 $\frac{1}{2}$	30	30	37 $\frac{1}{2}$
	Length Flange End Valve with By-Pass							30 $\frac{1}{2}$				35 $\frac{1}{2}$	35 $\frac{1}{2}$	42
C	Diameter of End Flanges	22 $\frac{1}{4}$	23 $\frac{1}{2}$	25	27 $\frac{1}{2}$	29	31	35		40	44	49	51	59
D	Thickness of End Flanges	1 $\frac{1}{4}$	1 $\frac{5}{8}$	1 $\frac{5}{8}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	1 $\frac{7}{8}$		1 $\frac{3}{4}$	1 $\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$
E	Height to Wheel, Ins. Scr. Valve	37 $\frac{5}{8}$	37 $\frac{1}{2}$	42 $\frac{7}{8}$	45 $\frac{1}{8}$	49 $\frac{1}{8}$	52 $\frac{7}{8}$	57 $\frac{1}{8}$		67 $\frac{1}{4}$	78 $\frac{1}{2}$			
w	Diameter of Wheel, " " "	18	18	20	22	22	24	24		30	36			
R	Height to Wheel, Outs. Scr. Valve	53 $\frac{1}{8}$	55 $\frac{5}{8}$	61 $\frac{1}{8}$	67 $\frac{1}{8}$	72	77 $\frac{1}{8}$							
S	Height to Spindle when open, " "	71 $\frac{1}{8}$	73 $\frac{1}{8}$	82 $\frac{7}{8}$	90 $\frac{1}{8}$	97	104 $\frac{1}{8}$							
W	Diameter of Wheel, " "	22	22	24	24	24	30	30		36				
Size of By-Pass Valve								5		5	5	6	6	8
No. of Bolts, End Flange Drilling, 2 up		16	16	16	20									
Diam. of Bolts, End Flange Drilling		$\frac{7}{8}$	$\frac{7}{8}$	1	1									
Diam. of Bolt Circle, End Flange Drilling		20	21 $\frac{1}{4}$	22 $\frac{1}{4}$	25									

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

## DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

MAXIMUM TEMPERATURE, 325° FAH.

2½ IN. TO 10 IN.—150 LBS. WORKING WATER PRESSURE 12 IN. AND 14 IN.—75 LBS. WORKING WATER PRESSURE

2½ IN. TO 14 IN.—EXHAUST AND LOW PRESSURE STEAM

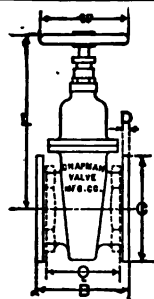


FIG. 540

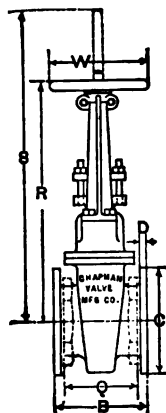


FIG. 541

DIAMETER OF PORT		2½	3	3½	4	4½	5	6	7	8	9	10	12	14
Q	Length Screw End Valve	6½	8	8½	9½	9½	9½	10½	11½	12	12½			
B	Length Flg. End Valve without By-Pass	7½	8½	8½	9½	9½	9½	10½	10½	10½	11½	12½	12½	14
	Length Flange End Valve with By-Pass													
C	Diameter of End Flanges	7	7½	8½	9	9½	10	11	12½	13½	15	16	19	21
D	Thickness of End Flanges	1½	1½	1½	2	2	2	1½	1½	1½	1½	1	1½	1½
L	Height to Wheel, Ins. Scr. Valve	10½	11½	12½	13½	15½	16	17½	22½	21½	26½	26½	30½	34½
w	Diameter of Wheel, " " "	6	7	7	8	8½	8½	10	12	13	14	14	15	16
R	Height to Wheel, Outs. Scr. Valve		14½		17½		20½	23½	28½	30½	35½	37½	43½	49½
S	Height to Spindle when open, " "		18½		23½		27½	31½	37½	40½	46½	49½	57½	65½
W	Diameter of Wheel, " " "	8	8½	10	10	12	12	13	14	15	15	16	18	20
Size of By-Pass Valve														
	No. of Bolts, End Flange Drilling, 2 up	4	4	4	4	8	8	8	8	8	12	12	12	12
	Diam. of Bolts, End Flange Drilling	½	½	½	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾
	Diam. Bolt Circle, End Flange Drilling	5½	6	7	7½	7½	8½	9½	10½	11½	13½	14½	17	18½

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

# CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 21  
CONTINUED

## DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

MAXIMUM TEMPERATURE, 325° FAN.

15 IN. TO 20 IN.—75 LBS. WORKING WATER PRESSURE

22 IN. TO 48 IN.—60 LBS. WORKING WATER PRESSURE

15 IN. TO 48 IN.—EXHAUST AND LOW PRESSURE STEAM

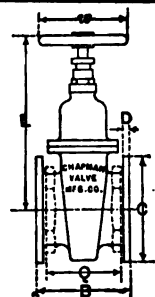


FIG. 542

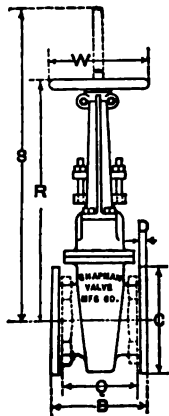


FIG. 543

DIAMETER OF PORT		15	16	18	20	22	24	26	28	30	36	40	42	48
B	Length Flg. End Valve without By-Pass	15 $\frac{1}{8}$	16 $\frac{1}{8}$	18	19	19 $\frac{1}{2}$	20	22		27 $\frac{1}{8}$	29 $\frac{1}{2}$	30	30	37 $\frac{1}{2}$
	Length Flange End Valve with By-Pass							30 $\frac{1}{4}$				35 $\frac{1}{8}$	35 $\frac{1}{2}$	42
C	Diameter of End Flanges	22 $\frac{1}{4}$	23 $\frac{1}{2}$	25	27 $\frac{1}{2}$	29	31	35		40	44	49	51	59
D	Thickness of End Flanges	1 $\frac{1}{4}$	1 $\frac{5}{8}$	1 $\frac{5}{8}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	1 $\frac{7}{8}$		1 $\frac{3}{4}$	1 $\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$
E	Height to Wheel, Ins. Scr. Valve	37 $\frac{5}{8}$	37 $\frac{1}{2}$	42 $\frac{7}{8}$	45 $\frac{1}{2}$	49 $\frac{1}{2}$	52 $\frac{7}{8}$	57 $\frac{1}{8}$		67 $\frac{1}{4}$	78 $\frac{1}{2}$			
w	Diameter of Wheel, " " "	18	18	20	22	22	24	24		30	36			
R	Height to Wheel, Outs. Scr. Valve	53 $\frac{1}{8}$	55 $\frac{1}{8}$	61 $\frac{1}{8}$	67 $\frac{1}{8}$	72	77 $\frac{1}{8}$							
S	Height to Spindle when open, " "	71 $\frac{1}{8}$	73 $\frac{1}{8}$	82 $\frac{7}{8}$	90 $\frac{1}{8}$	97	104 $\frac{1}{8}$							
W	Diameter of Wheel, " "	22	22	24	24	24	30	30		36				
Size of By-Pass Valve								5		5	5	6	6	8
No. of Bolts, End Flange Drilling, 2 up		16	16	16	20									
Diam. of Bolts, End Flange Drilling		$\frac{7}{8}$	$\frac{7}{8}$	1	1									
Diam. of Bolt Circle, End Flange Drilling		20	21 $\frac{1}{4}$	22 $\frac{1}{4}$	25									

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

# CHAPMAN VALVE MANUFACTURING CO.

LIST No. 22

## DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER

3 IN. TO 10 IN.—150 LBS. WORKING WATER PRESSURE

12 IN. TO 16 IN.—75 LBS. WORKING WATER PRESSURE

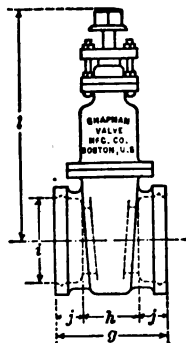


FIG. 544

DIAMETER OF PORT		3	4	5	6	7	8	9	10	12	14	15	16
g	End to End of Bell without By-Pass	9 $\frac{9}{16}$	11	10 $\frac{1}{8}$	11 $\frac{9}{16}$	12	12 $\frac{1}{8}$	12 $\frac{1}{2}$	13 $\frac{1}{8}$	13 $\frac{3}{8}$	14 $\frac{1}{4}$	16 $\frac{1}{8}$	15 $\frac{1}{4}$
	End to End of Bell with By-Pass												
h	End to End of Pipe in line without By-Pass	4 $\frac{1}{8}$	5	4 $\frac{7}{8}$	5 $\frac{9}{16}$	6	6 $\frac{1}{8}$	6 $\frac{3}{8}$	7 $\frac{1}{8}$	7 $\frac{1}{2}$	8 $\frac{1}{4}$	10	8 $\frac{3}{4}$
	End to End of Pipe in line with By-Pass												
i	Diam. of Bell Socket	4 $\frac{1}{4}$	5 $\frac{1}{4}$	6 $\frac{1}{8}$	7 $\frac{1}{8}$	8 $\frac{1}{8}$	10	11	12	14 $\frac{1}{4}$	16 $\frac{1}{4}$	17 $\frac{1}{4}$	18 $\frac{1}{4}$
j	Depth of Bell Socket	2 $\frac{1}{4}$	3	3	3	3	3	3	3	3	3 $\frac{1}{4}$	3 $\frac{1}{4}$	3 $\frac{1}{4}$
	End to End of Spigot without By-Pass												
	End to End of Spigot with By-Pass												
	Outside Diam. of Spigot												
l	Height to Nut, Ins. Scr. Valve	14 $\frac{1}{16}$	16 $\frac{7}{16}$	18 $\frac{1}{16}$	19 $\frac{1}{16}$	23 $\frac{1}{16}$	23 $\frac{1}{16}$	27 $\frac{1}{16}$	28	31 $\frac{1}{16}$	35 $\frac{7}{16}$	38 $\frac{1}{16}$	39
	Side of Square Nut	2	2	2	2	2	2	2	2	2	2	2	2
	Size of By-Pass Valve												

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 22  
CONTINUED

DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER

18 IN. AND 20 IN.—75 LBS. WORKING WATER PRESSURE

22 IN. TO 48 IN.—80 LBS. WORKING WATER PRESSURE

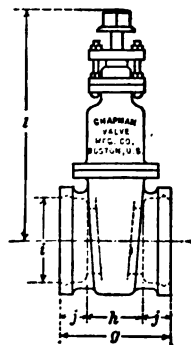


FIG. 848

DIAMETER OF PORT		18	20	22	24	26	28	30	36	40	42	48	54
g	End to End of Bell without By-Pass	16½	17½	19	19½	21½		25	26½	29	29	31	
	End to End of Bell with By-Pass					27½		28½					
h	End to End of Pipe in line without By-Pass	9½	10½	11½	11½	12½		15	16½	18½	18½	20	
	End to End of Pipe in line with By-Pass					18½		18½					
i	Diam. of Bell Socket	20½	22½	24½	26½	28½		33	39½	44	46½	52½	
j	Depth of Bell Socket	3½	3½	3½	4	4½		5	5	5½	5½	5½	
	End to End of Spigot without By-Pass												
	End to End of Spigot with By-Pass												
	Outside Diam. of Spigot												
1	Height to Nut, Ins. Scr. Valve	43½	48½	51½	55	59½							
	Side of Square Nut	2	2	2	2	2		2	2	2	2	2	
	Size of By-Pass Valve					5		5	5	6	6	8	

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

## DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES

FOR WATER AND STEAM

MAXIMUM TEMPERATURE 325° FAH.

2½ IN. TO 10 IN.—150 LBS. WORKING WATER PRESSURE

12 IN. TO 18 IN.—75 LBS. WORKING WATER PRESSURE

2½ IN. TO 18 IN.—EXHAUST AND LOW PRESSURE STEAM

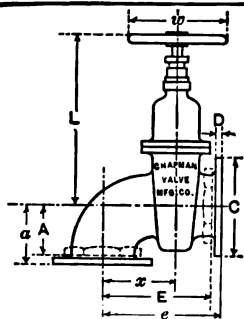


FIG. 846

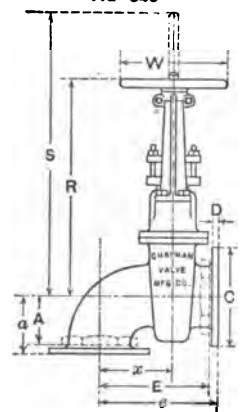


FIG. 847

DIAMETER OF PORT		2½	3	3½	4	4½	5	6	7
A	Center to Face of Angle End, Screw End Valve								
E	“ “ Straight “ “ “ “								
a	“ “ Angle “ Flg. End Valve								
e	“ “ Straight “ Flg. End Valve without By-Pass								
x	Center Angle End to Center Spindle								
C	Diameter of End Flanges	7	7½	8½	9	9½	10	11	12½
D	Thickness of End Flanges	1½	1½	1½	2½	2	2	1½	1½
L	Height to Wheel, Ins. Scr. Valve	10½	11½	12½	13½	15½	16	17½	22½
w	Diameter of Wheel, “ “ “	6	7	7	8	8½	8½	10	12
R	Height to Wheel, Outs. Scr. Valve		14½		17½		20½	23½	28½
S	Height to Spindle when open, “ “ “		18½		23½		27½	31½	37½
W	Diameter of Wheel, “ “ “	8	8½	10	10	12	12	13	14
Size of By-Pass Valve									
No. of Bolts, End Flange Drilling, 2 up		4	4	4	4	8	8	8	8
Diam. of Bolts, “ “ “		½	½	½	¾	¾	¾	¾	¾
Diameter of Bolt Circle, “ “ “		5½	6	7	7½	7½	8½	9½	10½

# CHAPMAN VALVE MANUFACTURING CO.

## DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES

LIST NO. 23  
CONTINUED

FOR WATER AND STEAM

MAXIMUM TEMPERATURE 325° FAH.

2½ IN. TO 10 IN.—150 LBS. WORKING WATER PRESSURE

12 IN. TO 18 IN.—75 LBS. WORKING WATER PRESSURE

2½ IN. TO 18 IN.—EXHAUST AND LOW PRESSURE STEAM

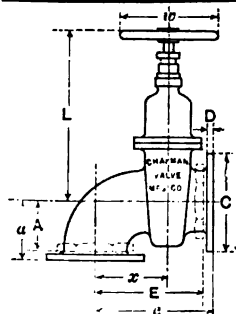


FIG. 548

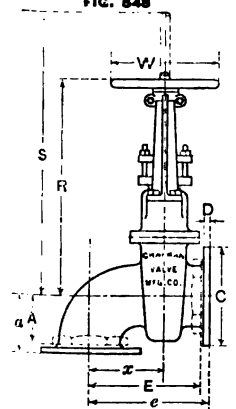


FIG. 549

DIAMETER OF PORT		8	9	10	12	14	15	16	18
A	Center to Face of Angle End, Screw End Valve								
E	" " Straight " " " "								
a	" " Angle " Flg. End Valve	9½		10½	11½	13½		15	
e	" " Straight " Flg. End Valve without By-Pass	13½		15 9/16	16 7/8	19 1/8		21 1/8	
x	Center Angle End to Center Spindle	8		9½	10 3/8	12 3/8		13 1/2	
C	Diameter of End Flanges	13½	15	16	19	21	22½	23½	25
D	Thickness of End Flanges	7/8	1 1/8	1	1 3/8	1 5/8	1 7/8	1 3/4	1 9/8
L	Height to Wheel, Ins. Scr. Valve	21 1/8	26 1/8	26 3/16	30 3/8	34 3/8	37 5/16	37 7/8	42 7/8
w	Diameter of Wheel, " " "	13	14	14	15	16	18	18	20
R	Height to Wheel, Outs. Scr. Valve	30 1/8	35 1/8	37 3/8	43 1/8	49 1/8	53 1/8	55 1/8	61 1/8
S	Height to Spindle when open, " " "	40 7/8	46 1/8	49 1/8	57 1/8	65 1/8	71 1/8	73 1/8	82 1/8
W	Diameter of Wheel, " " "	15	15	16	18	20	22	22	24
Size of By-Pass Valve									
No. of Bolts, End Flange Drilling, 2 up		8	12	12	12	12	16	16	16
Diam. of Bolts, " " "		5/8	5/8	3/4	3/4	7/8	7/8	7/8	1
Diam. of Bolt Circle, " " "		11 1/4	13 1/4	14 1/4	17	18 3/4	20	21 1/4	22 3/4



# CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 24

## DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

MAXIMUM TEMPERATURE 325° FAH.

150 LBS. WORKING WATER PRESSURE

50 LBS. WORKING STEAM PRESSURE

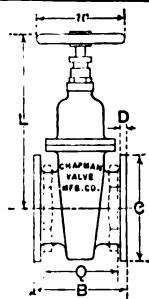


FIG. 580



FIG. 581

DIAMETER OF PORT		2½	3	3½	4	4½	5	6	7	8	9	10	12	14
Q	Length Screw End Valve	6½	8	8½	9½	9½	9½	10½	11½	12	12½			
B	Length Flange End Valve without By-Pass	7½	8½	8½	9½	9½	9½	10½	10½	10½	11½	12½	12	14
	Length Flange End Valve with By-Pass*													
C	Diameter of End Flanges	7	7½	8½	9	9½	10	11	12½	13½	15	16	19	21
D	Thickness of End Flanges	1½	1½	1½	2	2	2	2½	2½	2½	2½	2½	2½	2½
L	Height to Wheel, Ins. Scr. Valve	10½	11½	12½	13½	15½	16	17½	22½	21½	26½	26½	30½	34
w	Diameter of Wheel, " " "	6	7	7	8	8½	8½	10	12	13	14	14	15	16
R	Height to Wheel, Outs. Scr. Valve		14½		17½		20½	23½	28½	30½	35½	37½	43½	48
S	Height to Spindle when open " " "		18½		23½		27½	31½	37½	40½	46½	49½	57½	63
W	Diameter of Wheel, " " "	8	8½	10	10	12	12	13	14	15	15	16	18	20
Size of By-Pass Valve														
	No. of Bolts, End Flange Drilling, 2 up	4	4	4	4	8	8	8	8	8	12	12	12	12
	Diam. of Bolts, End Flange Drilling	½	½	½	¾	¾	¾	¾	¾	¾	¾	¾	1	1
	Diam. of Bolt Circle, End Flange Drilling	5½	6	7	7½	7½	8½	9½	10½	11½	13½	14½	17	18

\*For other Dimensions of Valves with By-Pass see BY-PASS DIMENSIONS  
For Dimensions of Geared Valves see DIMENSIONS OF GEARING

# CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 24

## DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM CONTINUED

MAXIMUM TEMPERATURE, 325° FAH

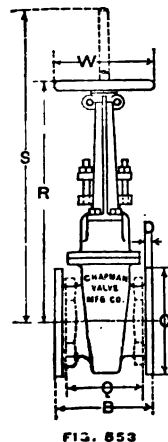
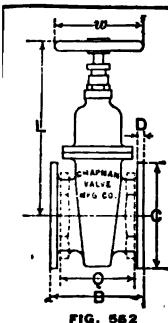
80 LBS. WORKING STEAM PRESSURE

15 IN. TO 24 IN.—125 LBS. WORKING WATER PRESSURE

26 IN. TO 48 IN.—90 LBS. WORKING WATER PRESSURE

DIAMETER OF PORT		15	16	18	20	22	24	26	28	30	36	40	42	48
B	Length Flange End Valve, without By-Pass	15 $\frac{5}{8}$	16 $\frac{3}{4}$	18	19	19 $\frac{1}{2}$	20	22		27 $\frac{5}{8}$	29 $\frac{1}{2}$	30	30	37 $\frac{1}{2}$
	Length Flange End Valve, with By-Pass*							30 $\frac{3}{4}$				35 $\frac{3}{4}$	35 $\frac{1}{2}$	42
C	Diameter of End Flanges	22 $\frac{1}{2}$	23 $\frac{1}{2}$	25	27 $\frac{1}{2}$	29	31	35		40	44	49	51	59
D	Thickness of End Flanges	1 $\frac{1}{4}$	1 $\frac{5}{16}$	1 $\frac{5}{16}$	1 $\frac{3}{8}$	1 $\frac{3}{8}$	1 $\frac{3}{8}$	1 $\frac{7}{16}$		1 $\frac{5}{8}$	1 $\frac{3}{4}$	2 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{3}{8}$
L	Height to Wheel, Ins. Scr. Valve	37 $\frac{5}{8}$	37 $\frac{7}{8}$	42 $\frac{7}{8}$	45 $\frac{1}{8}$	49 $\frac{3}{8}$	52 $\frac{7}{8}$	57 $\frac{3}{8}$		67 $\frac{1}{2}$	78 $\frac{1}{2}$			
w	Diameter of Wheel, " " "	18	18	20	22	22	24	24		30	36			
R	Height to Wheel, Outs. Scr. Valve	53 $\frac{9}{16}$	55 $\frac{5}{16}$	61 $\frac{1}{16}$	67 $\frac{3}{8}$	72	77 $\frac{1}{8}$							
S	Height to Spindle when open, " " "	71 $\frac{1}{16}$	73 $\frac{3}{8}$	82 $\frac{7}{16}$	90 $\frac{3}{8}$	97	104 $\frac{1}{8}$							
W	Diameter of Wheel, " " "	22	22	24	24	24	30	30		36				
Size of By-Pass Valve								5		5	5	6	6	8
No. of Bolts, End Flange Drilling, 2 up		16	16	16	20									
Diam. of Bolts, " " "		1	1	1 $\frac{1}{8}$	1 $\frac{1}{8}$									
Diam. Bolt Circle, " " "		20	21 $\frac{1}{4}$	22 $\frac{3}{4}$	25									

\*For other Dimensions of Valves with By-Pass see BY-PASS DIMENSIONS  
For Dimensions of Geared Valves see DIMENSIONS OF GEARING



CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 25

DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER

150 LBS. WORKING PRESSURE

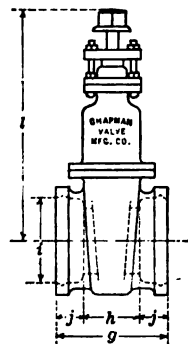


FIG 554

DIAMETER OF PORT		3	4	5	6	7	8	9	10	12	14	15	16
g	End to End of Bell, without By-Pass	9 $\frac{9}{16}$	11	10 $\frac{1}{2}$	11 $\frac{1}{16}$	12	12 $\frac{7}{8}$	12 $\frac{7}{8}$	13 $\frac{1}{2}$	13 $\frac{7}{8}$	14 $\frac{1}{2}$	16 $\frac{1}{2}$	15 $\frac{1}{2}$
	End to End of Bell, with By-Pass												
h	End to End of Pipe in line, without By-Pass	4 $\frac{1}{16}$	5	4 $\frac{7}{8}$	5 $\frac{9}{16}$	6	6 $\frac{7}{8}$	6 $\frac{7}{8}$	7 $\frac{1}{2}$	7 $\frac{7}{8}$	8 $\frac{1}{2}$	10	8 $\frac{1}{2}$
	End to End of Pipe in line, with By-Pass												
i	Diam. of Bell Socket	4 $\frac{3}{4}$	5 $\frac{1}{4}$	6 $\frac{1}{8}$	7 $\frac{1}{8}$	8 $\frac{1}{8}$	10	11	12	14 $\frac{1}{8}$	16 $\frac{1}{4}$	17 $\frac{1}{2}$	18 $\frac{1}{2}$
j	Depth of Bell Socket	2 $\frac{3}{4}$	3	3	3	3	3	3	3	3	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$
	End to End of Spigot, without By-Pass												
	End to End of Spigot, with By-Pass												
	Outside Diameter of Spigot												
l	Height to Nut, Ins. Scr. Valve	14 $\frac{5}{16}$	16 $\frac{7}{16}$	18 $\frac{1}{16}$	19 $\frac{1}{16}$	23 $\frac{1}{16}$	23 $\frac{1}{16}$	27 $\frac{1}{16}$	28	31 $\frac{1}{4}$	35 $\frac{7}{16}$	38 $\frac{1}{2}$	39
	Side of Square Nut	2	2	2	2	2	2	2	2	2	2	2	2
	Size of By-Pass Valve												

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

CHAPMAN VALVE MANUFACTURING CO.

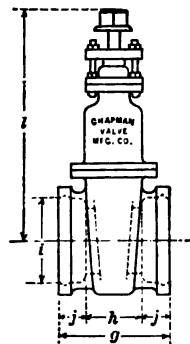
DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER

LIST NO. 25

CONTINUED

18 IN. TO 24 IN.—150 LBS. WORKING PRESSURE

26 IN. TO 48 IN.—100 LBS. WORKING PRESSURE



DIAMETER OF PORT		18	20	22	24	26	28	30	36	40	42	48
g	End to End of Bell, without By-Pass	16½	17½	19	19½	21½		25	26½	29	29	31
	End to End of Bell, with By-Pass					27½						
h	End to End of Pipe in Line, without By-Pass	9½	10½	11½	11½	12½		15	16½	18½	18½	20
	End to End of Pipe in Line, with By-Pass					18½						
i	Diameter of Bell Socket	20½	22½	24½	26½	28½		33	39½	4½	46½	52½
j	Depth of Bell Socket	3½	3½	3½	4	4½		5	5	5½	5½	5½
	End to End of Spigot, without By-Pass											
	End to End of Spigot, with By-Pass											
	Diameter of Spigot											
1	Height to Nut, Ins. Screw Valve	43½	48½	51½	55	59½						
	Side of Square Nut,	2	2	2	2	2		2	2	2	2	2
	Size of By-Pass Valve					5		5	5	6	6	8

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

**DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES FOR WATER AND STEAM**

MAXIMUM TEMPERATURE 325 DEG. FAH.

80 LBS. WORKING STEAM PRESSURE

2½ IN. TO 16 IN.—150 LBS. WORKING WATER PRESSURE

16 IN. TO 18 IN.—125 LBS. WORKING WATER PRESSURE

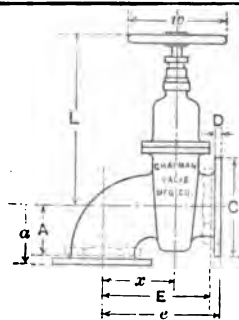


FIG. 556

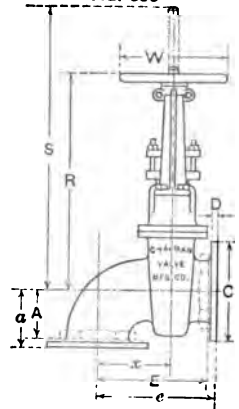


FIG. 557

DIAMETER OF PORT		2½	3	3½	4	4½	5	6	7	8	9	10	12	14	15	16	18
A	Center to Face of Angle End, Scr. End Valve																
E	Center to Face of Straight End, " " "																
a	Center to Face of Angle End, Flg. End Valve									9½	10½	11½	13½		15		
e	Center to Face of Straight End, { Flg. End Valve without By Pass									13½	15½	16½	19½		21½		
	Center to Face of Straight End, { Flg. End Valve with By Pass																
x	Center Angle End to Cen. Spindle									8	9½	10½	12½		13½		
C	Diameter of End Flanges	7	7½	8½	9	9½	10	11	12½	13½	15	16	19	21	22	23	25
D	Thickness of End Flanges	1½	1½	1½	2	2	2	2½	2½	2½	3	3	1	1½	1½	1½	1
L	Height to Wheel, Ins. Scr. Valve	10½	11½	12½	13½	15½	16	17½	22½	21½	26½	26½	30½	34½	37½	42½	
w	Diameter of Wheel, " " "	6	7	7	8	8½	8½	10	12	13	14	14	15	16	18	18	20
R	Height to Wheel, Outs. Scr. Valve	14½		17½		20½	23½	26½	30½	35½	37½	43½	49½	53½	55½	61½	
S	Height to Spindle when open, " " "	18½		23½		27½	31½	37½	40½	46½	49½	57½	65½	71½	73½	80½	
W	Diameter of Wheel, " " "	8	8½	10	10	12	12	13	14	15	15	16	18	20	22	22	24
Size of By Pass Valve																	
No. of Bolts,	End Flange Drilling, 2 up	4	4	4	4	8	8	8	8	8	12	12	12	12	16	16	16
Diam. of Bolts,	" " "	¾	¾	¾	¾	1	1	1	1	1	1	1	1	1	1	1	1½
Diam. of Bolt Circle,	" " "	5½	6	7	7½	7½	8½	9½	10½	11½	13½	14½	17	18½	20	21½	22½

# CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 3

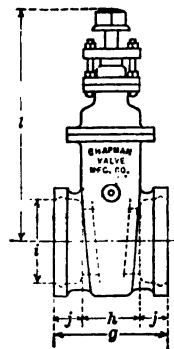
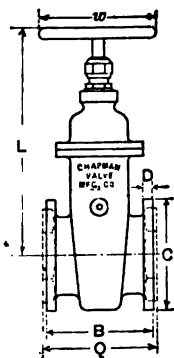
LIST NO. 27

## DIMENSIONS OF IRON BODY BRONZE MOUNTED AUTOMATIC DRIP VALVES

BABBITT METAL SEATS

200 LBS. WORKING WATER PRESSURE

		SCREW TOP						BOLT TOP									
DIAMETER OF PORT		1	1½	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	
Q	Length Screw End Valve	3½	4½	4½	5½	6½	7½	8½	9½	9½	10½	11½	12½	12½	13½	13½	
B	Length Flange End Valve	4½	4½	5½	5½	7½	8½	8½	9½	10½	9½	10½	11½	11½	12½	13½	
C	Diameter of End Flanges	4	4½	5	6	7	7½	8½	9	9½	10	11	12½	13½	15	16	
D	Thickness of End Flanges	7⁄8	1	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1	1½	1½	
L	Height to Wheel	5½	6½	7½	8½	10½	11½	12½	13½	15½	17½	20½	22½	24½	26½	28½	
w	Diameter of Wheel	3½	4	4½	5	6	7	8	8½	10	10	12	13	14	14	15	
	No. of Bolts—End Flange Drilling	2 up		4	4	4	4	4	4	8	8	8	8	8	12	12	
	Diam. of Bolts— " " "	7⁄8	7⁄8	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Diam. of Bolt Circle— " "	3	3½	3½	4½	5½	6	7	7½	7½	8½	9½	10½	11½	13½	14½	
g	Length Bell End Valve				8½		9½		11½		11½	12	12	12½	13½	13½	
h	End to End of Pipe in Line				3½		3½		5½		5½	6	6	6½	7½	7½	
i	Diameter of Bell Socket				3½		4½		5½		6½	7½	8½	10	11	12	
j	Depth of Bell Socket				2½		2½		3		3	3	3	3	3	3	
	Length of Spigot End Valve				17½		20½		22½		22½	23½	23½	24	24½	24½	
	Diameter of Spigot				2½		3½		5		6	7	8½	9½	10½	11½	
l	Height to Nut				11½		14		17½		19½	22½	24½	26½	28½	31	
	Side of Square Nut				2		2		2		2	2	2	2	2	2	



CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 7

LIST NO. 28

DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

MAXIMUM TEMPERATURE 325° FAH.

200 LBS. WORKING WATER PRESSURE

80 LBS. WORKING STEAM PRESSURE

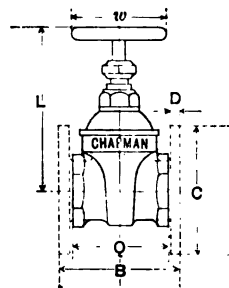


FIG. 580

DIAMETER OF PORT		1	1 1/8	1 1/2	1 3/4	1	1 1/4	1 1/2	2	2 1/2	3
Q	Length Screw End Valve	2 1/8	2 1/8	2 3/4	3 1/8	3 1/8	4 1/4	4 3/4	5 3/4	6 3/4	7 1/4
B	Length Flange End Valve	2 1/8	2 1/8	3 1/4	3 3/8	4 1/4	4 3/4	5 1/4	5 5/8	6 3/4	7 1/4
C	Diameter of End Flanges	2 1/4	2 1/4	3	3	4	4 1/2	5	6	7	7 1/2
D	Thickness of End Flanges	1 5/16	1 5/16	3	3	1 7/8	2	2 1/8	3	1 1/2	3 3/4
L	Height to Wheel, Ins. Scr. Valve	3 3/4	3 3/4	4 3/4	4 3/4	5 3/4	6 3/4	7 5/8	8 1/4	9 1/4	11 1/4
w	Diameter of Wheel, " " "	2 1/8	2 1/8	2 5/8	3 1/4	3 3/4	4	4 1/2	5	6	7
No. of Bolts, End Flange Drilling, 2 up						4	4	4	4	4	4
Diam. of Bolts, " " "						7/16	7/16	1/2	5/8	5/8	5/8
Diam. of Bolt Circle, " " "						3	3 3/8	3 3/8	4 1/4	5 1/4	6

CHAPMAN VALVE MANUFACTURING CO.

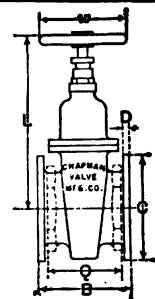


FIG. 561

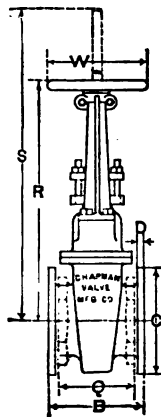


FIG. 562

FORMER TABLES NOS. 8 AND 9

DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

MAXIMUM TEMPERATURE 325° FAH.

200 LBS. WORKING WATER PRESSURE

50 LBS. WORKING STEAM PRESSURE

LIST NO. 29

DIAMETER OF PORT		2½	3	3½	4	4½	5	6	7	8	9	10	12	14
Q	Length Screw End Valve	6½	7½	8½	9½	9½	10½	11½	12½	12½	13½	13½	14½	
B	Length Flange End Valve without By-Pass	7½	8½	8½	9½	10½	9½	10½	11½	11½	12½	13½	14½	15½
	Length Flange End Valve with By-Pass*													
C	Diameter of End Flanges	7	7½	8½	9	9½	10	11	12½	13½	15	16	19	21
D	Thickness of End Flanges	1½	2½	3½	3½	3½	3½	3½	3½	1	1½	1½	1½	1½
L	Height to Wheel, Ins. Scr. Valve	10½	11½	12½	13½	15½	17½	20½	22½	24½	26½	28½	33½	35½
	Ht. to Wheel with Side Indicator " " "	13	14½	15½	16½	19½	21½	23½	25½	28½	29½	32½	36½	44
w	Diameter of Wheel, " " "	6	7	8	8½	10	10	12	13	14	14	15	16	18
R	Height to Wheel, Outs. Scr. Valve	12½	13½	15½	17½	19½	21½	25½	27½	31½	34½	37½	43½	49½
S	Height to Spindle when open, " " "	15½	17½	20½	22½	25½	27½	32½	36½	41½	45½	50½	58½	66
W	Diameter of Wheel, " " "	8	8½	10	10	12	12	13	14	15	15	16	18	20
Size of By-Pass Valve														
No. of Bolts, End Flange Drilling, 2 up		4	4	4	4	8	8	8	8	8	12	12	12	12
Diam. of Bolts, " " "		½	½	½	¾	¾	¾	¾	¾	¾	¾	¾	1	1
Diam. Bolt Circle, " " "		5½	6	7	7½	7½	8½	9½	10½	11½	13½	14½	17	18½

\*For other Dimensions of Valves with By-Pass see BY-PASS DIMENSIONS

For Dimensions of Geared Valves see DIMENSIONS OF GEARING



# CHAPMAN VALVE MANUFACTURING CO.

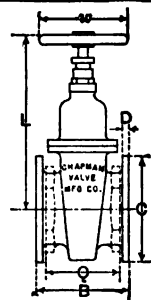


FIG. 563

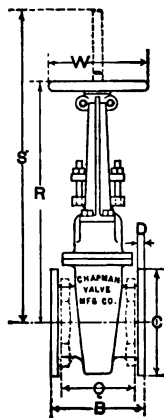


FIG. 564

## FORMER TABLES NOS. 8 AND 9

### DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER AND STEAM

MAXIMUM TEMPERATURE 325° FAH.

18 IN. TO 24 IN.—175 LBS. WORKING WATER PRESSURE

90 LBS. WORKING STEAM PRESSURE

26 IN. TO 48 IN.—150 LBS. WORKING WATER PRESSURE

LIST No. 29

CONTINUED

DIAMETER OF PORT		15	16	18	20	22	24	26	28	30	36	40	42	48
B	Length Flange End Valve without By-Pass	16½	18½	20	21	22½	24	26		30	32½	32½	32½	
	Length Flange End Valve with By-Pass*		26½	26½	27	32	32½	32½		36	37½	38½	39	52
C	Diameter of End Flanges	22½	23½	25	27½	29	31	35		40	46	52	54	61
D	Thickness of End Flanges	1½	1½	1½	1½	1½	1½	1½		2½	2½	2½	3	3½
L	Height to Wheel, Ins. Scr. Valve	39	40½	44½	47½	50½	56½	59½		68½				
	Hgt. to Wheel with Side Ind., " " "	44½	45½	51	55	57½	62½							
w	Diameter of Wheel, " " "	20	20	22	24	24	24			36				
R	Height to Wheel, Outs. Scr. Valve	53½	56½	62½	67½	72½	78½	85½		97½				
S	Height to Spindle when open, " " "	71½	75½	83½	90½	97½	105½	113½		131½				
W	Diameter of Wheel, " " "	22	22	24	24	24	30	30		36				
	No. of Bolts, End Flange Drilling, 2 up	16	16	16	20									
	Diam. of Bolts, " " "	1	1	1½	1½									
	Diam. of Bolt Circle, " " "	20	21½	22½	25									
	Size of By-Pass Valve		4	4	4	5	5	5		6	8	8	8	12

\*For other Dimensions of Valves with By-Pass see BY-PASS DIMENSIONS

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 14

LIST NO. 30

DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER

BELL OR SPIGOT ENDS

NO GEARING

2 IN. TO 12 IN.—200 LBS. WORKING PRESSURE

14 IN. AND 15 IN.—175 LBS. WORKING PRESSURE

DIAMETER OF PORT

2 3 4 5 6 8 9 10 12 14 15

g	End to End of Bells without By-Pass	8 $\frac{1}{2}$	9 $\frac{1}{2}$	11 $\frac{1}{2}$	11 $\frac{3}{4}$	12	12	12 $\frac{1}{2}$	13 $\frac{1}{2}$	13 $\frac{3}{4}$	14	16 $\frac{1}{2}$	16 $\frac{3}{4}$
	End to End of Bells with By-Pass*												
h	End to End of Pipe in line without By-Pass	3 $\frac{1}{2}$	3 $\frac{3}{4}$	5 $\frac{1}{2}$	5 $\frac{3}{4}$	6	6	6 $\frac{1}{2}$	7 $\frac{1}{2}$	7 $\frac{3}{4}$	8	10	10
	End to End of Pipe in line with By-Pass*												
i	Diameter of Bell Socket	3 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$	7 $\frac{1}{2}$	8 $\frac{1}{2}$	10	11	12	14 $\frac{1}{2}$	16 $\frac{1}{2}$	17 $\frac{1}{2}$
j	Depth of Bell Socket	2 $\frac{1}{2}$	2 $\frac{3}{4}$	3	3	3	3	3	3	3	3	3 $\frac{1}{2}$	3 $\frac{3}{4}$
	End to End of Spigots without By-Pass	17 $\frac{1}{2}$	20 $\frac{1}{2}$	22 $\frac{1}{2}$	22 $\frac{3}{4}$	23 $\frac{1}{2}$	23 $\frac{3}{4}$	24	24 $\frac{1}{2}$	27	30	32	
	End to End of Spigots with By-Pass*												
	Outside Diameter of Spigot	2 $\frac{1}{2}$	3 $\frac{1}{2}$	5	6	7	8 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{2}$	11 $\frac{1}{2}$	13 $\frac{1}{2}$	15 $\frac{1}{2}$	16 $\frac{3}{4}$
l	Height to Nut, Ins. Scr. Valve	11 $\frac{1}{2}$	14	17 $\frac{1}{2}$	19 $\frac{1}{2}$	22 $\frac{1}{2}$	24 $\frac{1}{2}$	26 $\frac{1}{2}$	28 $\frac{1}{2}$	31	36	38 $\frac{1}{2}$	41 $\frac{1}{2}$
	Side of Square Nut	2	2	2	2	2	2	2	2	2	2	2	2
	Size of By-Pass Valve												

\* For other Dimensions of Valves with By-Pass see BY-PASS DIMENSIONS  
For Dimensions of Geared Valves see DIMENSIONS OF GEARING

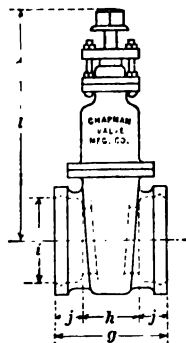


FIG. 555

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 14

LIST NO. 30  
CONTINUED

DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER

BELL OR SPIGOT ENDS

NO GEARING

16 IN. TO 24 IN.—175 LBS. WORKING PRESSURE

26 IN. TO 48 IN.—150 LBS. WORKING PRESSURE

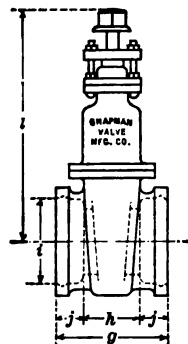


FIG. 566

DIAMETER OF PORT		16	18	20	22	24	26	28	30	36	40	42	48
g	End to End of Bells without By-Pass	16 $\frac{1}{8}$	17 $\frac{1}{8}$	18 $\frac{1}{8}$	19	20 $\frac{1}{8}$	21 $\frac{1}{8}$		25	26 $\frac{1}{8}$	29	29	
	End to End of Bells with By-Pass*	25 $\frac{1}{2}$	25 $\frac{1}{2}$	25 $\frac{1}{2}$	28 $\frac{3}{8}$	29 $\frac{3}{8}$	27 $\frac{3}{8}$		33 $\frac{1}{2}$	36	33	33	48
h	End to End of Pipe in line without By-Pass	9 $\frac{1}{8}$	10 $\frac{1}{8}$	11 $\frac{1}{8}$	11 $\frac{1}{8}$	12 $\frac{1}{8}$	12 $\frac{1}{8}$		15	16 $\frac{1}{8}$	18 $\frac{1}{8}$	18 $\frac{1}{8}$	
	End to End of Pipe in line with By-Pass*	18 $\frac{1}{2}$	18 $\frac{1}{2}$	18 $\frac{1}{2}$	20 $\frac{1}{8}$	20 $\frac{1}{8}$	18 $\frac{3}{8}$		23 $\frac{1}{2}$	26	22 $\frac{1}{2}$	22 $\frac{1}{2}$	37
i	Diameter of Bell Socket	18 $\frac{1}{2}$	20 $\frac{1}{8}$	22 $\frac{1}{4}$	24 $\frac{1}{4}$	26 $\frac{1}{4}$	28 $\frac{1}{4}$		33	39 $\frac{1}{4}$	44	46 $\frac{1}{4}$	52 $\frac{1}{2}$
j	Depth of Bell Socket.	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	4 $\frac{1}{8}$	4 $\frac{1}{2}$		5	5	5 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$
	End to End of Spigots without By-Pass	31 $\frac{1}{2}$	34 $\frac{1}{2}$	35 $\frac{1}{2}$	35 $\frac{3}{4}$	36 $\frac{1}{2}$							
	End to End of Spigots with By-Pass*												
	Outside Diameter of Spigot	17 $\frac{1}{8}$	20	22	24 $\frac{1}{8}$	26 $\frac{1}{8}$							
l	Height to Nut, Ins. Scr. Valve	43	48	50	53 $\frac{1}{4}$	58 $\frac{1}{4}$	61 $\frac{1}{4}$						
Side of Square Nut		2	2	2	2	2	2		2	2	2	2	2
Size of By-Pass Valve		4	4	4	5	5	5		6	8	8	8	12

\* For other Dimensions of Valves with By-Pass see BY-PASS DIMENSIONS  
For Dimensions of Geared Valves see DIMENSIONS OF GEARING

# CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 31

## DIMENSIONS OF IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES FOR WATER AND STEAM

MAXIMUM TEMPERATURE 325° FAH.

200 LBS. WORKING WATER PRESSURE

80 LBS. WORKING STEAM PRESSURE

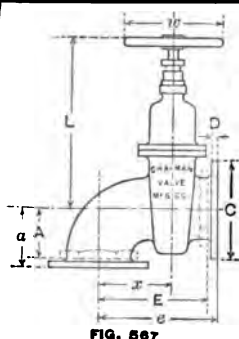


FIG. 567

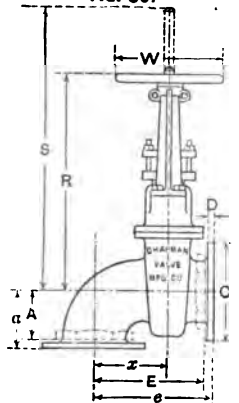


FIG. 568

DIAMETER OF PORT *		½	1	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12	14
A	Cen. to Face of Angle End, Scr. End Valve	1½				3½	3½	4½	4½	5½	6	6½	7½	8½	9½	10½	12	
E	" " " Straight " " " "	3				5½	6½	7½	8½	9½	10½	11½	12½	13½	14½	15½	16½	
a	" " " Angle " , Flg. End Valve					3½	3½	4½	4½	5½	6	6½	7½	8½	9½	10½	12	13½
e	" " " Straight " , " " "					6	6½	7½	8½	9½	10½	10½	12½	13½	13½	15½	16½	18½
C	Diameter of End Flanges	3	4	4½	5	6	7	7½	8½	9	9½	10	11	12½	13½	15	16	19
D	Thickness of End Flanges	½	¾	1	1½	1	1½	1½	1½	1½	1½	1½	1½	1	1½	1½	1½	1½
x	Center of Angle End to Center of Spindle	1½				2½	3	3½	4½	4½	5½	6½	7½	8	8½	9½	10½	12½
L	Height to Wheel, Ins. Scr. V.	4½	5½	6½	7½	8½	10½	11½	12½	13½	15½	17½	20½	22½	24½	26½	28½	35½
	Hgt. to Wheel with Side Indicator, " " "					13	14½	15½	16½	19½	21½	23½	25½	28½	29½	32½	36½	44
w	Diameter of Wheel, " " "	3½	3½	4	4½	5	6	7	8	8½	10	10	12	13	14	15	16	18
R	Height to Wheel, Outs. Scr. V.					12½	13½	15½	17½	19½	21½	25½	27½	31½	34½	37½	43½	49½
S	Height to Spindle when open, " " "					15½	17½	20½	22½	25½	27½	32½	36½	41½	45½	50½	58½	66
W	Diameter of Wheel, " " "					8	8½	10	10	12	12	13	14	15	15	16	18	20
	No. of Bolts, End Flange Drilling, 2 up		4	4	4	4	4	4	4	8	8	8	8	8	12	12	12	12
	Diameter of Bolts, " " "		½	¾	1	1½	1½	1½	1½	2	2	2	2	2	2	2	2	1
	Diameter Bolt Circle, " " "		3	3½	3½	4½	5½	6	7	7½	8½	9½	10½	11½	13½	14½	17	18½

For dimensions of geared valves see DIMENSIONS OF GEARING

\* Larger sizes furnished if desired

## DIMENSIONS OF EXTRA HEAVY IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER

MAXIMUM TEMPERATURE 325° FAH.

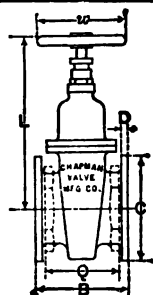
 $\frac{1}{2}$  TO 4 IN.—600 LBS. WORKING PRESSURE4 $\frac{1}{2}$  AND 6 IN.—450 LBS. WORKING PRESSURE

FIG. 569

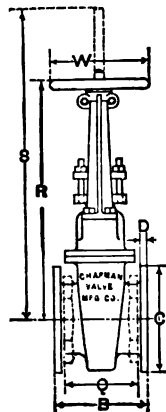


FIG. 570

		SCREW TOP								BOLTED TOP							
DIAMETER OF PORT		$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5					
Q	Length Screw End Valve	3 $\frac{1}{4}$	3 $\frac{3}{4}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$	6	7	8 $\frac{1}{2}$	9 $\frac{1}{2}$	9 $\frac{1}{2}$	10	11 $\frac{1}{2}$	12 $\frac{1}{2}$		
B	Length Flange End Valve without By-Pass	3 $\frac{3}{4}$	3 $\frac{3}{4}$	4 $\frac{1}{2}$	5	5 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	11 $\frac{1}{2}$	11 $\frac{1}{2}$	12	13 $\frac{1}{2}$	15		
	Length Flange End Valve with By-Pass														18 $\frac{1}{2}$		
C	Diameter of End Flanges	3	3	3	4	4 $\frac{1}{2}$	5	6	6 $\frac{1}{2}$	7	8	8 $\frac{1}{2}$	9	9 $\frac{1}{2}$	10 $\frac{1}{2}$		
D	Thickness of End Flanges	$\frac{7}{16}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$		
L	Height to Wheel, Ins. Scr. Valve			6 $\frac{3}{8}$	7 $\frac{3}{8}$	7 $\frac{3}{8}$	8 $\frac{1}{8}$	9 $\frac{1}{8}$	10 $\frac{1}{8}$	12 $\frac{5}{8}$	13 $\frac{3}{8}$	13 $\frac{3}{8}$	15 $\frac{1}{8}$	17 $\frac{1}{8}$	20 $\frac{1}{8}$		
w	Diameter of Wheel, " " "	3 $\frac{1}{2}$	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5	5	6	7	8 $\frac{1}{2}$	10	10	12	12	13		
R	Height to Wheel, Outs. Scr. Valve			6 $\frac{5}{8}$	7 $\frac{5}{8}$	8 $\frac{1}{8}$	9	10 $\frac{1}{8}$	13 $\frac{1}{8}$	15 $\frac{1}{8}$	16 $\frac{1}{8}$	18	20 $\frac{1}{8}$	24 $\frac{1}{8}$			
S	Hgt. to Spindle when Open, " " "			7 $\frac{5}{8}$	9	10 $\frac{3}{8}$	11 $\frac{1}{2}$	13 $\frac{1}{2}$	15 $\frac{1}{2}$	19 $\frac{1}{2}$	21 $\frac{1}{8}$	23 $\frac{5}{8}$	26 $\frac{1}{2}$	31 $\frac{1}{2}$			
W	Diameter of Wheel, " " "			4 $\frac{1}{2}$	5	5	6	7	10	10	12	12	13	14			
	No. of Bolts, End Flange Drilling, 2 up		4	4	4	4	4	5	6	6	7	8	8	9			
	Diameter of Bolts, End Flange Drilling		$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{7}{8}$			
	Diameter Bolt Circle, End Flange Drilling		2 $\frac{1}{2}$	2 $\frac{1}{2}$	3 $\frac{1}{2}$	3 $\frac{1}{2}$	4 $\frac{1}{2}$	5	5 $\frac{1}{2}$	6 $\frac{1}{2}$	6 $\frac{1}{2}$	7 $\frac{1}{2}$	7 $\frac{1}{2}$	8 $\frac{1}{2}$			
	Outside Diam. of Tongue on End Flanges		1 $\frac{1}{2}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{1}{2}$	6 $\frac{1}{2}$	6 $\frac{1}{2}$	7 $\frac{1}{2}$			
	Inside Diam. of Tongue " " "		$\frac{7}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{8}$	4 $\frac{1}{8}$	4 $\frac{1}{8}$	5 $\frac{1}{8}$	5 $\frac{1}{8}$	6 $\frac{1}{8}$			
	Height of Tongue " " "		$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$			
	Size of By-Pass Valve													1 $\frac{1}{2}$			
	Cen. of Spindle of Main V. to Cen. of By-Pass V.													10 $\frac{1}{2}$			

## DIMENSIONS OF EXTRA HEAVY IRON BODY BRONZE MOUNTED BABBITT SEAT GATE VALVES FOR WATER

250 LBS. WORKING WATER PRESSURE

MAXIMUM TEMPERATURE 325° FAH.

## DIAMETER OF PORT

		6	7	8	9	10	12	14	15	16	18	20	22	24	26
Q	Length Screw End Valve	13 $\frac{3}{8}$	14 $\frac{1}{2}$	15											
B	Length Flg. End V. without By-Pass	15 $\frac{5}{8}$	16 $\frac{1}{2}$	16 $\frac{1}{2}$	17	18	19 $\frac{3}{4}$	21 $\frac{1}{2}$	21 $\frac{1}{2}$	21 $\frac{1}{2}$	22	23 $\frac{1}{2}$	24 $\frac{1}{2}$	25 $\frac{3}{4}$	
	Length Flange End Valve with By-Pass	19	20	20 $\frac{3}{8}$	21 $\frac{7}{8}$	22 $\frac{3}{4}$	23 $\frac{3}{4}$	25 $\frac{1}{4}$	26 $\frac{1}{4}$	32 $\frac{1}{4}$	33 $\frac{1}{4}$	35 $\frac{1}{4}$	35 $\frac{1}{4}$	35 $\frac{1}{4}$	
C	Diameter of End Flanges	12	13	14	15	17	19	22	22 $\frac{1}{2}$	24	26 $\frac{1}{2}$	29	31	34	
D	Thickness of End Flanges	1 $\frac{3}{8}$	1 $\frac{7}{8}$	1 $\frac{1}{2}$	1 $\frac{9}{16}$	1 $\frac{1}{8}$	1 $\frac{1}{4}$	2	2 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{5}{8}$	2 $\frac{3}{4}$	2 $\frac{9}{8}$	2 $\frac{1}{2}$	
L	Height to Wheel, Ins. Scr. Valve	22 $\frac{9}{16}$	24 $\frac{9}{16}$	26 $\frac{7}{8}$	29 $\frac{1}{4}$	31 $\frac{3}{8}$	35 $\frac{1}{4}$	37 $\frac{1}{2}$	42 $\frac{3}{8}$	43 $\frac{3}{8}$	47 $\frac{9}{16}$	52 $\frac{3}{8}$	55 $\frac{1}{4}$	59 $\frac{1}{2}$	
w	Diameter of Wheel, " " "	14	14	15	16	18	18	20	20	22	24	30	30	36	
R	Height to Wheel, Outs Scr. Valve	28 $\frac{7}{8}$	31 $\frac{1}{2}$	35 $\frac{1}{2}$	37 $\frac{3}{8}$	41 $\frac{1}{4}$	46 $\frac{7}{8}$	50 $\frac{1}{8}$	55 $\frac{1}{2}$	58 $\frac{1}{8}$	63 $\frac{1}{8}$	69 $\frac{3}{8}$	74 $\frac{1}{2}$	80 $\frac{3}{8}$	
S	Hgt. to Spindle when Open, " " "	36 $\frac{1}{2}$	40 $\frac{1}{8}$	45 $\frac{1}{2}$	48 $\frac{3}{8}$	53 $\frac{3}{8}$	60 $\frac{1}{4}$	66 $\frac{1}{8}$	73 $\frac{1}{8}$	76 $\frac{1}{4}$	84 $\frac{1}{4}$	92 $\frac{1}{8}$	99 $\frac{3}{8}$	107	
W	Diameter of Wheel, " " "	15	16	16	18	18	20	20	24	24	30	30	30	36	
No. of Bolts, End Flange Drilling, 2 up		10	11	12	13	15	18	18	18	20	22	24	24	24	
Diameter of Bolts, End Flange Drilling		$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	1	1	1	1	1 $\frac{1}{4}$	1 $\frac{1}{8}$	1 $\frac{1}{2}$	
Diameter Bolt Circle, End Flange Drilling		10	11 $\frac{1}{4}$	12 $\frac{1}{4}$	13 $\frac{1}{4}$	14 $\frac{3}{4}$	17	19 $\frac{1}{2}$	20 $\frac{3}{8}$	21 $\frac{3}{4}$	24	26 $\frac{1}{2}$	28 $\frac{1}{2}$	31 $\frac{1}{4}$	
Outside Diam. of Tongue on End Flanges		8 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{2}$	11 $\frac{1}{2}$	13 $\frac{1}{4}$	15 $\frac{1}{4}$	17 $\frac{3}{8}$	18 $\frac{1}{2}$	20 $\frac{1}{2}$	22 $\frac{3}{8}$	24 $\frac{5}{8}$	26 $\frac{1}{2}$	28 $\frac{1}{2}$	
Inside Diam. of Tongue " " "		7 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{2}$	11 $\frac{1}{2}$	13 $\frac{1}{8}$	15 $\frac{1}{4}$	17 $\frac{1}{4}$	18 $\frac{3}{8}$	20 $\frac{3}{8}$	22 $\frac{1}{8}$	24 $\frac{1}{2}$	26 $\frac{1}{2}$	
Height of Tongue " " "		$\frac{9}{16}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	
Size of By-Pass Valve		1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2	2	2	3	3	4	4	4	
Cen. of Spindle of Main V. to Cen. of By-Pass V.		11 $\frac{1}{8}$	11 $\frac{1}{4}$	12 $\frac{1}{8}$	13 $\frac{3}{8}$	13 $\frac{7}{8}$	16 $\frac{1}{2}$	16 $\frac{3}{4}$	18 $\frac{1}{4}$	20	20 $\frac{3}{8}$	23 $\frac{1}{4}$	25 $\frac{1}{4}$	27	

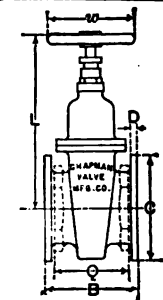


FIG. 571

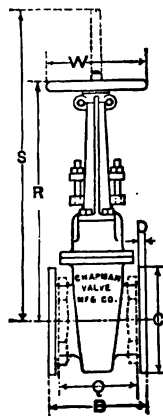


FIG. 572

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 33

DIMENSIONS OF EXTRA HEAVY IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES FOR WATER

600 LBS. WORKING PRESSURE

MAXIMUM TEMPERATURE, 325° FAH

DIAMETER OF PORT		SCREW TOP								BOLT TOP		
		1	1 1/8	1 1/2	2	1	1 1/8	1 1/2	2	2 1/2	3	3 1/2
A	Cen. to Face of Angle End, Scr. End Valve			1 7/8	2 1/4	2 9/16	2 11/8	3 1/4	3 3/4	4 1/4	4 7/8	5 1/2
E	" " " Straight End, " " "			3 1/4	3 3/4	4 1/4	4 3/8	5 1/4	6 3/8	7 1/8	9 1/2	10 3/4
a	" " " Angle End, Flg. End Valve			2	2 3/8	2 5/8	2 7/8	3 1/4	3 3/4	4 1/4	4 7/8	5 1/2
c	" " " Straight End, " " "			3 3/8	3 15/16	4 1/8	4 15/16	5 3/8	7 1/8	8 1/2	10	11 3/8
x	Cen. of Angle End to Cen. of Spindle			1 1/4	1 7/8	1 3/4	2	2 1/4	3 1/4	3 3/4	4 7/8	5 1/2
C	Diameter of End Flanges			3	4	4 1/2	5	6	6 1/2	7	8	8 1/2
D	Thickness of End Flanges			1/2	5/8	3/4	7/8	1 1/8	1 1/8	1 3/8	1 1/2	1 5/8
L	Height to Wheel, Ins. Scr. Valve			6 3/16	7 3/16	7 7/8	8 9/16	9 1/4	10 1/8	12 5/16	13 3/8	13 7/8
w	Diameter of Wheel, " " "			4	4 1/2	5	5	6	7	8 1/2	10	10
R	Height to Wheel, Outs. Scr. Valve			6 5/8	7 3/4	8 1/8	9	10 5/8	13 5/8	15 1/2	16 1/2	16 3/4
S	Height to Spindle when open, " " "			7 3/4	9	10 3/8	11 1/2	13 1/4	15 3/8	19 3/8	21 7/8	21 7/8
W	Diameter of Wheel, " " "			4 1/2	5	5	6	7	10	10	10	12
No. of Bolts,	End Flange Drilling			4	4	4	4	4	5	6	6	7
Diameter of Bolts,	" " "			7/16	1/2	1/2	5/8	5/8	5/8	3/4	3/4	3/4
Diameter of Bolt Circle,	" " "			2 1/4	2 1/4	3 1/4	3 3/4	4 1/2	5	5 1/2	6 1/4	6 3/4
Outside Diam of Tongue on End Flanges				1 1/2	2 1/8	2 1/2	3	3 1/2	4 1/4	4 1/4	5 1/4	5 1/2
Inside Diam. of Tongue " " "				7/8	1 3/8	1 1/4	2 1/8	2 1/2	3 1/4	3 1/4	4 1/4	4 3/4
Height of Tongue " " "				5/8	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4

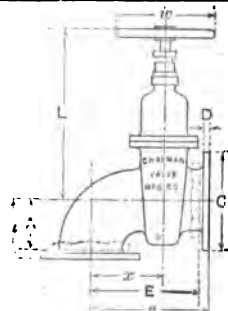


FIG. 573

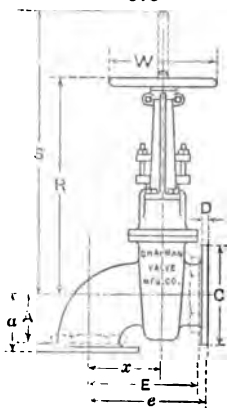


FIG. 574

# CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 33  
CONTINUED

## DIMENSIONS OF EXTRA HEAVY IRON BODY BRONZE MOUNTED BABBITT SEAT ANGLE GATE VALVES FOR WATER

MAXIMUM TEMPERATURE, 325° FAH.

4 IN.—600 LBS. WORKING PRESSURE

4½ TO 9 IN.—450 LBS. WORKING PRESSURE

10 TO 16 IN.—350 LBS. WORKING PRESSURE

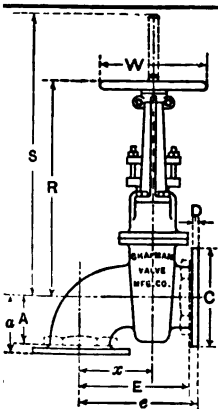


FIG. 578

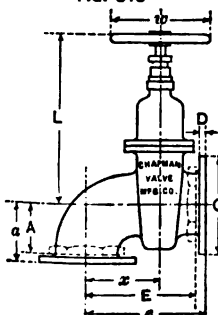


FIG. 579

DIAMETER OF PORT		4	4½	5	6	7	8	9	10	12	14
A	Cen. to Face of Angle End, Scr. End Valve	6									
E	" " " " Straight End, " " "	10½									
a	" " " " Angle End, Flg. End Valve	6	6½	7½	8½	8½	9½	10½	11½	13	
e	" " " " Straight End, " " " , No By-Pass	11½	12½	14½	15½	16½	17½	18	19½	21½	
x	Cen. of Angle End to Cen. of Spindle	5½	6½	6½	7½	8½	9	9½	10½	11½	
C	Diameter of End Flanges	9	9½	10½	12	13	14	15	17	19	22
D	Thickness of End Flanges	1½	1½	1½	1½	1½	1½	1½	1½	1½	2
L	Height to Wheel, Ins. Scr. Valve	15½	17½	20½	22½	24½	26½	29½	31½	35½	37½
w	Diameter of Wheel, " " "	12	12	13	14	14	15	16	18	18	20
R	Height to Wheel, Outs. Scr. Valve	18	20½	24½	28½	31½	35½	37½	41½	46½	50½
S	Height to Spindle when open, " " "	23½	26½	31½	36½	40½	45½	48½	53½	60½	66½
W	Diameter of Wheel, " " "	12	13	14	15	16	16	18	18	20	20
No. of Bolts, End Flange Drilling, 2 up		8	8	9	10	11	12	13	15	18	18
Diam. of Bolts, " " "		¾	¾	¾	¾	¾	¾	¾	¾	¾	1
Diam. of Bolt Circle, " " "		7½	7½	8½	10	11½	12½	13½	14½	17	19½
Outside Diam. of Tongue on End Flanges		6½	6½	7½	8½	9½	10½	11½	13½	15½	17½
Inside Diam. of Tongue " " "		5½	5½	6½	7½	8½	9½	10½	11½	13½	15½
Height of Tongue " " "		¾	¾	¾	¾	¾	¾	¾	¾	¾	¾
Size of By-Pass Valve			1½	1½	1½	1½	1½	1½	1½	2	2
Cen. to Face of Straight End, Flg. End Valve, with By-Pass			15½	17	18½	19½	20½	21½	23½		
Cen. of Spindle Main Valve to Center of By-Pass			10½	11½	11½	12½	13½	13½	16½	16½	



CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 11

LIST NO. 34

DIMENSIONS OF SPECIAL HEAVY PRESSURE IRON BODY BRONZE MOUNTED GATE VALVES FOR WATER AND OIL  
1,000 LBS. WORKING PRESSURE  
BABBITT SEATS.—MAXIMUM TEMPERATURE 325° FAH.

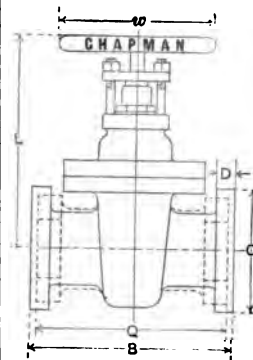


FIG. 577

DIAMETER OF PORT		2	2½	3	3½	4	4½	5	6
Q	Length Screw End Valve	8 7/8	9 1/8	10 1/8		16 1/8	16	18 1/8	18
B	Length Flange End Valve without By-Pass	10 1/8	11	12 1/8		18	19 1/8	21 1/8	23 1/8
	Length Flange End Valve with By-Pass								23 1/8
C	Diameter of End Flanges	7	8	8		11	12	13	14
D	Thickness of End Flanges	3/4	1	1 1/4		1 1/8	1 3/8	1 7/8	2
L	Height to Wheel, Ins. Scr. Valve	12 1/8	13 3/8	14 1/8		19 1/8	20 3/8	21 3/8	23 1/8
w	Diameter of Wheel, " " "	10	10	12	13	14	15	15	16
Number of Bolts, End Flange Drilling, 2 up									
Diam. of Bolts, " " "									
Diam. Bolt Circle, " " "									
Size of By-Pass Valve									1 1/4
Number of Turns to Open		7 1/2	9	14		15 1/2	17	18 1/2	22 1/2

CHAPMAN VALVE MANUFACTURING CO.

LISTS NOS. 35 AND 58

DIMENSIONS OF SPECIAL C P IRON BODY BOLT TOP GATE VALVES

FOR STEAM, WATER, AIR, GAS, ETC.

DIAMETER OF PORT			12	14	15	16	18	20	22	24	25	26	28	30	36	40	42	48	50	54
B	Length of Flange End Valve					11 $\frac{1}{2}$	12 $\frac{1}{2}$	13 $\frac{1}{2}$	13 $\frac{3}{4}$	14				16 $\frac{3}{4}$	19 $\frac{1}{4}$					
C	Diameter of End Flanges		18	21	22	23	25	27	29	31		35	37	40	44	49	51	59		
D	Thickness of End Flanges		1	1 $\frac{1}{8}$	1 $\frac{1}{8}$	1 $\frac{3}{8}$	1 $\frac{3}{8}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{5}{8}$		1 $\frac{3}{8}$	1 $\frac{3}{8}$	1 $\frac{3}{8}$	1 $\frac{1}{2}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$	2 $\frac{3}{8}$		
L	Height to Wheel,	Ins. Scr. Valve				41	46	49	52	56				68	80					
w	Diameter of Wheel,	" " "				18	20	22	22	24				30	36					
R	Height to Wheel,	Outs. " "					60	67		76				93						
S	Hgt. to Spindle when open,	" " "					81	89		103				126						
W	Diameter of Wheel,	" " "					24	24		30				36						
No. of Bolts, End Flange Drilling						14	16	18	20	20				24						
Diam. of Bolts, " " "						$\frac{7}{8}$	$\frac{7}{8}$	1	1	1				1 $\frac{1}{8}$						
Diam. Bolt Circle, " " "						20 $\frac{1}{8}$	22 $\frac{1}{8}$	24 $\frac{1}{8}$	26 $\frac{1}{8}$	29				36 $\frac{1}{8}$						
Width of Valve across Cap Flange						24	27	29	31	33				42	49					
g	Length over all, Bell End Valve																			
h	End to End of Pipe in Line, " " "																			
i	Diameter of Bell Socket, " " "																			
j	Depth of Bell Socket, " " "																			

CHAPMAN VALVE MANUFACTURING CO.

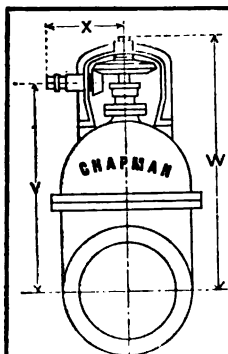


FIG. 591

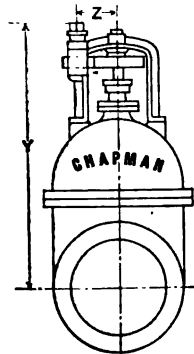


FIG. 592

DIMENSIONS OF GEARING FOR INSIDE SCREW VALVES

IN LISTS 21, 22, 23, 24, 25, 26, 51 AND 52

DIAMETER OF PORT		9	10	12	14	15	16	18	20	22	24	26	28	30	36	40	42	48
V	Cen. of Port to Cen. of Nut on Bevel Gears							40 $\frac{1}{8}$	43 $\frac{1}{8}$	47 $\frac{5}{16}$	50 $\frac{1}{16}$	54 $\frac{3}{8}$		61 $\frac{1}{4}$	73 $\frac{1}{4}$	83 $\frac{1}{8}$	86 $\frac{1}{8}$	95 $\frac{1}{4}$
W	Cen. of Port to End of Spindle on Bevel Gears							47 $\frac{7}{8}$	51 $\frac{1}{4}$	55 $\frac{1}{2}$	57 $\frac{1}{2}$	62 $\frac{1}{2}$		71 $\frac{1}{2}$	84 $\frac{1}{2}$	94 $\frac{1}{8}$	97 $\frac{1}{8}$	110 $\frac{1}{2}$
X	Cen. of Spindle to End of Nut on Bevel Gears							15 $\frac{5}{8}$	15 $\frac{3}{4}$	15 $\frac{5}{8}$	15 $\frac{5}{8}$	15 $\frac{5}{8}$		19 $\frac{1}{2}$	20 $\frac{3}{4}$	22 $\frac{1}{2}$	22 $\frac{1}{2}$	27 $\frac{1}{2}$
Y	Cen. of Port to Top of Nut on Spur Gears							52	56	59 $\frac{9}{16}$	62 $\frac{1}{2}$	67		74 $\frac{1}{2}$	87 $\frac{1}{2}$	96 $\frac{3}{8}$	99 $\frac{3}{8}$	113 $\frac{1}{2}$
Z	Cen. of Spindle to Cen. of Nut on Spur Gears							6 $\frac{1}{8}$	8 $\frac{1}{8}$	8 $\frac{1}{8}$	8 $\frac{1}{8}$	8 $\frac{1}{8}$		9 $\frac{1}{4}$	9 $\frac{1}{4}$	9 $\frac{1}{4}$	9 $\frac{1}{4}$	13 $\frac{1}{4}$
Side of Square Nut		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

# CHAPMAN VALVE MANUFACTURING CO.

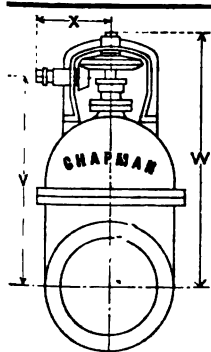


FIG. 593

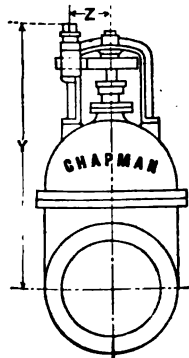


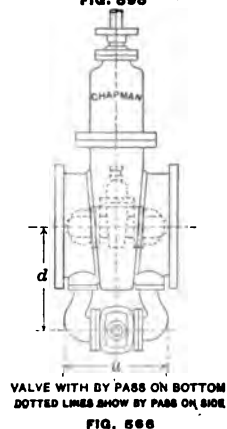
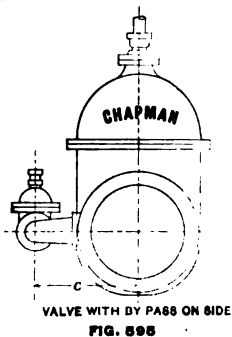
FIG. 594

## DIMENSIONS OF GEARING FOR INSIDE SCREW VALVES

IN LISTS 29, 30, 31, 41 AND 42

DIAMETER OF PORT		9	10	12	14	15	16	18	20	22	24	26	28	30	36	40	42	48
V	Cen. of Port to Cen. of Nut on Bevel Gears		27 $\frac{1}{8}$	31 $\frac{7}{8}$	34 $\frac{9}{16}$	35 $\frac{1}{2}$	36 $\frac{1}{2}$	41 $\frac{1}{2}$	44 $\frac{1}{2}$	47 $\frac{5}{8}$	51 $\frac{3}{8}$	54 $\frac{1}{2}$		62 $\frac{1}{2}$	74 $\frac{1}{2}$	84 $\frac{1}{2}$	87 $\frac{1}{2}$	95 $\frac{1}{2}$
W	Cen. of Port to End of Spindle on Bevel Gears		34 $\frac{1}{8}$	38 $\frac{1}{2}$	41 $\frac{7}{8}$	42 $\frac{1}{2}$	44 $\frac{1}{8}$	48 $\frac{1}{2}$	51 $\frac{1}{2}$	55	61 $\frac{1}{2}$	64 $\frac{1}{2}$		73 $\frac{1}{2}$	85 $\frac{1}{2}$	99 $\frac{1}{2}$	102 $\frac{1}{2}$	110 $\frac{1}{2}$
X	Cen. of Spindle to End of Nut on Bevel Gears		12 $\frac{1}{2}$	12 $\frac{1}{2}$	12 $\frac{1}{2}$	15 $\frac{1}{2}$	15 $\frac{1}{2}$	15 $\frac{1}{2}$	15 $\frac{1}{2}$	15 $\frac{1}{2}$	19 $\frac{1}{2}$	19 $\frac{1}{2}$		20 $\frac{1}{2}$	22 $\frac{1}{2}$	27 $\frac{1}{2}$	27 $\frac{1}{2}$	27 $\frac{1}{2}$
Y	Cen. of Port to Top of Nut on Spur Gears					47 $\frac{7}{8}$	48 $\frac{1}{2}$	53 $\frac{1}{2}$	56 $\frac{1}{2}$	59 $\frac{1}{2}$	64 $\frac{1}{2}$	68 $\frac{1}{2}$		76 $\frac{1}{2}$	88	101 $\frac{1}{2}$	104 $\frac{1}{2}$	113 $\frac{1}{2}$
Z	Cen. of Spindle to Cen. of Nut on Spur Gears					61 $\frac{1}{8}$	61 $\frac{1}{8}$	81	81	81	91	91		91	91	131	131	131
Side of Square Nut		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

# CHAPMAN VALVE MANUFACTURING CO.



## BY-PASS DIMENSIONS FOR VALVES IN LISTS 21, 22, 24, 25, 29 AND 30

DIAMETER OF PORT OF MAIN VALVE

16	18	20	22	24	26	28	30	36	40	42	48
----	----	----	----	----	----	----	----	----	----	----	----

## DIMENSIONS FOR VALVES IN LISTS 21, 22, 24 AND 25

Size of By-Pass Valve\*

c Cen. of Main Valve Spindle to Cen. of By-Pass on Side

d Cen. of Port to Cen. of By-Pass on Bottom

u Greatest Length of By-Pass Pipes

		3		4	5	5	5	5	6	6	8
c		20 $\frac{1}{8}$					27 $\frac{1}{8}$		38 $\frac{1}{2}$	38 $\frac{1}{2}$	42
d		20 $\frac{1}{8}$					27 $\frac{1}{8}$		26	26	42
u		19 $\frac{1}{2}$					24		26	26	31

## DIMENSIONS FOR VALVES IN LISTS 29 AND 30

Size of By-Pass Valve\*

c Cen. of Main Valve Spindle to Cen. of By-Pass on Side

d Cen. of Port to Cen. of By-Pass on Bottom

u Greatest Length of By-Pass Pipes

	4	4	4	5	5		6	8		12
c	20 $\frac{1}{8}$	22 $\frac{1}{8}$	23 $\frac{1}{2}$	21 $\frac{1}{8}$	23		30 $\frac{1}{2}$	32 $\frac{1}{8}$		44 $\frac{1}{2}$
d	20 $\frac{1}{8}$	22 $\frac{1}{8}$	23	21 $\frac{1}{8}$	23		29 $\frac{1}{2}$	32 $\frac{1}{8}$		44 $\frac{1}{2}$
u	23 $\frac{1}{2}$	23 $\frac{1}{2}$	23 $\frac{1}{2}$	23 $\frac{1}{2}$	23 $\frac{1}{2}$		26 $\frac{1}{2}$	30 $\frac{1}{2}$		42 $\frac{1}{2}$

\*Dimensions of By-Pass Valves same as regular valves in same list.

By-Pass Valves may be placed at right angles to position shown if so ordered.

These listed dimensions apply to both Inside and Outside Screw Valves.

# CHAPMAN VALVE MANUFACTURING CO.

LIST No. 41

## DIMENSIONS OF HEAVY IRON BODY RENEWABLE BRONZE SEAT GATE VALVES FOR STEAM AND WATER

1 IN. TO 2 IN.—160 LBS. WORKING STEAM PRESSURE

2½ IN. TO 6 IN.—125 LBS. WORKING STEAM PRESSURE

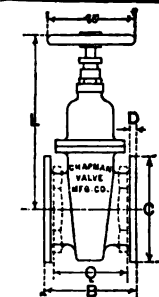


FIG. 600

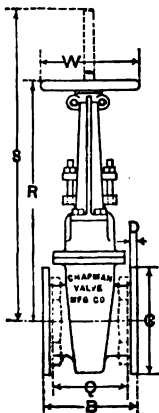


FIG. 601

				SCREW TOP				BOLT TOP									
DIAMETER OF PORT				1	1½	1½	2	2½	3	3½	4	4½	5	6	7	8	
Q	Length Screw End Valve				4½	4¾	5¼	6½	7½	8¾	9¾	9¾	10½	11¾	12½	12½	
B	Length Flange End Valve				4¾	5½	5¾	7½	8½	8¾	9¾	10½	9¾	10½	11½	11¾	
C	Diameter of End Flanges				4½	5	6	7	7½	8½	9	9½	10	11	12½	13½	
D	Thickness of End Flanges				½	¾	¾	1½	¾	¾	¾	¾	¾	¾	¾	1	
L	Height to Wheel,		Ins. Scr. Valve		6¾	7½	8½	11½	12½	13½	14½	16½	18½	21½	23½	25½	
w	Diameter of Wheel,		" " "		4	4½	5	6	7	8	8½	10	10	12	13	14	
R	Height to Wheel,		Outs. Scr. Valve					12½	13½	15½	17½	19½	22½	26½	29½	31½	
S	Height to Spindle when open		" " "					15½	17½	20½	22½	25½	29½	34½	38	42	
W	Diameter of Wheel,		" " "				8	8½	10	10	12	12	13	14	15		
No. of Bolts, End Flange Drilling, 2 up					4	4	4	4	4	4	4	8	8	8	8	8	
Diam. of Bolts, " " "					¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	
Diam. Bolt Circle, " " "					3¾	3¾	4¼	5½	6	7	7½	7¾	8½	9½	10½	11½	
Size of By-Pass Valves,												½	¾	¾	1		
Center of Main Valve Spindle to Center of By-Pass																	

**DIMENSIONS OF HEAVY IRON BODY BRONZE SEAT GATE VALVES FOR STEAM AND WATER**  
**BRONZE MOUNTINGS AND RENEWABLE BRONZE SEATS**

125 LBS. WORKING STEAM PRESSURE

DIAMETER OF PORT		9	10	12	14	15	16	18	20	22	24	26	28	30
Q	Length Screw End Valve	13 $\frac{1}{8}$	13 $\frac{3}{8}$	14 $\frac{1}{8}$										
B	Length Flange End Valve	12 $\frac{1}{2}$	13 $\frac{3}{8}$	14 $\frac{1}{8}$	15 $\frac{1}{8}$	16 $\frac{3}{8}$	18 $\frac{1}{8}$	20	21	22 $\frac{1}{2}$	24	26		30
C	Diameter of End Flanges	15	16	19	21	22 $\frac{1}{2}$	23 $\frac{1}{2}$	25	27 $\frac{1}{2}$	29	31	35		40
D	Thickness of End Flanges	1 $\frac{1}{8}$	1 $\frac{3}{8}$	1 $\frac{3}{8}$	1 $\frac{1}{2}$	1 $\frac{7}{8}$	1 $\frac{1}{2}$	1 $\frac{7}{8}$	1 $\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	1 $\frac{1}{2}$		2 $\frac{1}{4}$
L	Height to Wheel, Ins. Scr. Valve	27 $\frac{1}{2}$	30 $\frac{1}{8}$	34 $\frac{1}{8}$	36 $\frac{1}{8}$	39	40 $\frac{1}{2}$	44 $\frac{1}{2}$	47 $\frac{1}{2}$	50 $\frac{1}{2}$	56 $\frac{1}{2}$	59 $\frac{1}{2}$		68 $\frac{1}{2}$
w	Diameter of Wheel, " " "	14	15	16	18	20	20	22	24	24	24	24		36
R	Height to Wheel, Outs. Scr. Valve	35 $\frac{1}{2}$	39	44 $\frac{1}{2}$	49 $\frac{1}{2}$	53 $\frac{1}{2}$	56 $\frac{1}{2}$	62 $\frac{1}{2}$	67 $\frac{1}{2}$	72 $\frac{1}{2}$	78 $\frac{1}{2}$	85 $\frac{1}{2}$		97 $\frac{1}{2}$
S	Height to Spindle when open, " " "	46 $\frac{1}{2}$	51 $\frac{1}{2}$	58 $\frac{1}{2}$	66	71 $\frac{1}{2}$	75 $\frac{1}{2}$	83 $\frac{1}{2}$	90 $\frac{1}{2}$	97 $\frac{1}{2}$	105 $\frac{1}{2}$	113 $\frac{1}{2}$		131 $\frac{1}{2}$
W	Diameter of Wheel, " " "	15	16	18	20	22	22	24	24	24	30	30		36
No. of Bolts, End Flange Drilling, 2 up		12	12	12	12	16	16	18	20					
Diam. of Bolts, " " "		$\frac{3}{4}$	$\frac{7}{8}$	$\frac{7}{8}$	1	1	1	1 $\frac{1}{8}$	1 $\frac{1}{8}$					
Diam. of Bolt Circle, " " "		13 $\frac{1}{2}$	14 $\frac{1}{2}$	17	18 $\frac{1}{2}$	20	21 $\frac{1}{2}$	22 $\frac{1}{2}$	25					
Size of By-Pass Valve		1	1	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$	2	2	2 $\frac{1}{2}$	2 $\frac{1}{2}$		2 $\frac{1}{2}$
Center of Main Valve Spindle to Center of By-Pass														

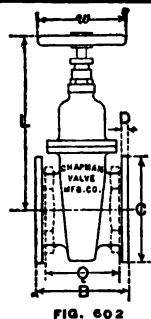


FIG. 602

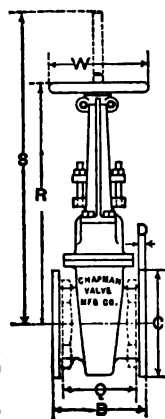


FIG. 603

CHAPMAN VALVE MANUFACTURING CO.

LIST No. 42

DIMENSIONS OF HEAVY IRON BODY BRONZE SEAT ANGLE GATE VALVES FOR STEAM AND WATER

1½ AND 2 IN.—160 LBS. WORKING STEAM PRESSURE

2½ IN. AND LARGER—125 LBS. WORKING STEAM PRESSURE

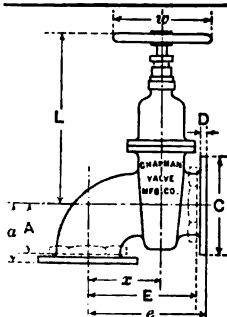


FIG. 604

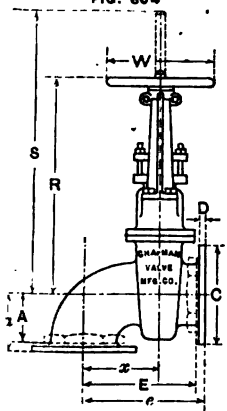


FIG. 605

		1½ IN. AND 2 IN., SCREW TOP—2½ IN. AND LARGER, BOLT TOP													
DIAMETER OF PORT		1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
A	Center to Face of Angle End, Screw End Valve			3½	4½	4½	5½	6	6½	7½	8½	9½	9½	10½	12
E	" " " Straight End, " " "			6½	7½	8½	9½	10½	11½	12½	13½	14½	15½	16½	
a	" " " Angle End, Fig. End Valve			3½	3½	4½	4½	5½	6	6½	7½	8½	9½	10½	12
e	" " " Straight End, " " "			5½	6½	7½	8½	9½	10½	11½	12½	13½	14½	15½	16½
x	Center of Angle End to Center of Spindle			2½	3	3½	4½	4½	5½	6½	7½	8	8½	9½	10½
C	Diameter of End Flanges	5	6	7	7½	8½	9	9½	10	11	12½	13½	15	16	19
D	Thickness of End Flanges	½	½	1½	1½	1½	1½	1½	1½	1½	1½	1	1½	1½	1½
L	Height to Wheel, Inside Screw Valve			8½	11½	12½	13½	14½	16½	18½	21½	23½	25½	27½	30½
w	Diameter of Wheel, " " "			5	6	7	8	8½	10	10	12	13	14	15	18
R	Height to Wheel, Outside Screw Valve			12½	13½	15½	17½	19½	22½	26½	29½	31½	35½	39	44½
S	Height to Spindle when open, " " "			15½	17½	20½	2½	25½	29½	34½	38	42	46½	51½	58½
W	Diameter of Wheel, " " "			8	8½	10	10	12	12	13	14	15	15	16	20
Number of Bolts, End Flange Drilling, 2 up		4	4	4	4	4	4	8	8	8	8	8	12	12	12
Diameter of Bolts " " "		½	½	½	½	½	½	¾	¾	¾	¾	¾	¾	¾	1
Diameter Bolt Circle " " "		3½	4½	5½	6	7	7½	7½	8½	9½	10½	11½	13½	14½	17
Size of By-Pass Valve									½	½	¾	1	1	1	1½
Center of Main Valve Spindle to Center of By-Pass															



CHAPMAN VALVE MANUFACTURING CO.

LIST No. 43

DIMENSIONS OF EXTRA HEAVY IRON BODY BRONZE SEAT GATE VALVES FOR STEAM AND WATER

BRONZE MOUNTINGS AND RENEWABLE BRONZE SEATS

250 LBS. WORKING STEAM PRESSURE

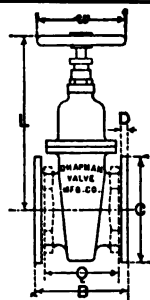


FIG. 606

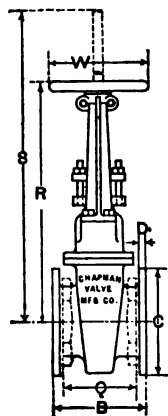


FIG. 607

		SCREW TOP							BOLT TOP						
DIAMETER OF PORT		$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	
Q	Length Screw End Valve	$4\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{2}$	6	7	$8\frac{1}{2}$	$9\frac{1}{2}$	$9\frac{1}{2}$	10	$11\frac{1}{2}$	$12\frac{1}{2}$	$13\frac{1}{2}$	$14\frac{1}{2}$	
B	Length Flange End Valve, without By-Pass	5	$5\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$	$8\frac{1}{2}$	$9\frac{1}{2}$	$11\frac{1}{2}$	$11\frac{1}{2}$	12	$13\frac{1}{2}$	15	$15\frac{1}{2}$	$16\frac{1}{2}$	
	Length Flange End Valve, with By-Pass											$18\frac{1}{2}$	19	20	
C	Diameter of End Flanges	4	$4\frac{1}{2}$	5	6	$6\frac{1}{2}$	$7\frac{1}{2}$	9	9	10	$10\frac{1}{2}$	11	13	14	
D	Thickness of End Flanges	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{5}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	
L	Height to Wheel, Ins. Scr. Valve	$7\frac{3}{8}$	$7\frac{1}{4}$	$8\frac{3}{8}$	9 $\frac{1}{4}$	$10\frac{1}{8}$	$12\frac{1}{8}$	$13\frac{1}{8}$	$13\frac{1}{8}$	$15\frac{1}{8}$	$17\frac{1}{8}$	$20\frac{1}{8}$	$22\frac{1}{8}$	$24\frac{1}{8}$	
w	Diameter of Wheel, " " "	$4\frac{1}{2}$	5	5	6	7	$8\frac{1}{2}$	10	10	12	12	13	14	14	
R	Height to Wheel, Outs. Scr. Valve	$6\frac{1}{8}$	$7\frac{1}{8}$	$8\frac{1}{8}$	9	$10\frac{1}{8}$	$13\frac{1}{8}$	15 $\frac{1}{8}$	$16\frac{1}{8}$	18	$20\frac{1}{8}$	$24\frac{1}{8}$	$28\frac{1}{8}$	31 $\frac{1}{8}$	
S	Height to Spindle when open, " " "	$7\frac{1}{2}$	9	$10\frac{3}{8}$	$11\frac{1}{2}$	$13\frac{1}{2}$	$15\frac{1}{2}$	19 $\frac{1}{2}$	$21\frac{1}{8}$	$23\frac{1}{8}$	$26\frac{1}{8}$	31 $\frac{1}{8}$	$36\frac{1}{8}$	$40\frac{1}{8}$	
W	Diameter of Wheel, " " "	$4\frac{1}{2}$	5	5	6	7	10	10	12	12	13	14	15	16	
No. of Bolts, End Flange Drilling, 2 up		4	4	4	4	5	6	6	7	8	8	9	10	12	
Diam. of Bolts, " " "		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{7}{8}$	
Diam. Bolt Circle, " " "		$2\frac{1}{2}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{1}{2}$	5	$5\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$	$9\frac{1}{2}$	$10\frac{1}{2}$	$12\frac{1}{2}$	
Outside Diam. of Tongue on End Flanges			$2\frac{1}{2}$	3	$3\frac{1}{2}$	$4\frac{1}{2}$	$4\frac{1}{2}$	5 $\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$	9 $\frac{1}{2}$	
Inside Diam. of Tongue " " "			$1\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{1}{8}$	$4\frac{1}{8}$	$4\frac{1}{8}$	$5\frac{1}{8}$	$5\frac{1}{8}$	$6\frac{1}{8}$	$7\frac{1}{8}$	8 $\frac{1}{8}$	
Height of Tongue " " "			$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	
Size of By-Pass Valve												$1\frac{1}{2}$	$1\frac{1}{2}$	1 $\frac{1}{2}$	
Center of Main Valve Spindle to Center of By-Pass												$10\frac{1}{2}$	$11\frac{1}{2}$	$11\frac{1}{2}$	

## DIMENSIONS OF EXTRA HEAVY IRON BODY BRONZE SEAT GATE VALVES FOR STEAM AND WATER

BRONZE MOUNTINGS AND RENEWABLE BRONZE SEATS

250 LBS. WORKING STEAM PRESSURE

## DIAMETER OF PORT

		8	9	10	12	14	15	16	18	20	22	24		
Q	Length Screw End Valve	15												
B	Length Flange End Valve, without By-Pass	16½	17	18	19½	21½	21½	21½	22	23½	24½	25½		
	Length Flange End Valve, with By-Pass	20½	21½	22½	23½	25½	26½	32½	33½	35½	35½	35½		
C	Diameter of End Flanges	15	16	17½	20	23	23½	25	27½	29	31	34		
D	Thickness of End Flanges	1½	1½	1½	1½	2	2½	2½	2½	2½	2½	2½		
L	Height to Wheel, Ins. Scr. Valve	26½	29½	31½	35½	37½	42½	43½	47½	52½	55½	59½		
w	Diameter of Wheel, " " "	15	16	18	18	20	20	22	24	30	30	36		
R	Height to Wheel, Outs. Scr. Valve	35½	37½	41½	46½	50½	55½	58½	63½	69½	74½	80½		
S	Height to Spindle when open, " " "	45½	48½	53½	60½	66½	73½	76½	84½	92½	99½	107		
W	Diameter of Wheel, " " "	16	18	18	20	20	24	24	30	30	30	36		
	No. of Bolts, End Flange Drilling, 2 up*	12	13	15	18	18	18	18	24	24	24	24		
	Diam. of Bolts, " " "	¾	¾	¾	¾	1	1	1	1	1½	1½	1½		
	Diam. Bolt Circle, " " "	13	14	15½	17½	20½	21½	22½	25	26½	28½	31½		
	Outside Diam. of Tongue on End Flanges	10½	11½	13½	15½	17½	18½	20½	22½	24½	26½	28½		
	Inside Diam. of Tongue " " "	9½	10½	11½	13½	15½	17½	18½	20½	22½	24½	26½		
	Height of Tongue " " "	½	½	½	½	½	¾	¾	¾	¾	¾	¾		
	Size of By-Pass Valve	1½	1½	1½	2	2	2	3	3	4	4	4		
	Center of Main Valve Spindle to Center of By-Pass	12½	13½	13½	16½	16½	18½	20	20½	23½	25½	27		

\*Bolts in End Flanges of 18 inch and 20 inch Valves are not spaced equally.

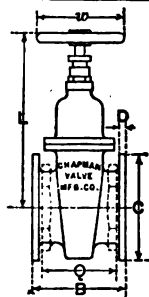


FIG. 608

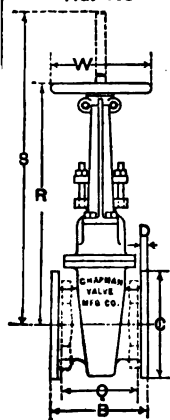


FIG. 609

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 44

DIMENSIONS OF EXTRA HEAVY IRON BODY BRONZE SEAT ANGLE GATE VALVES FOR STEAM AND WATER

BRONZE MOUNTINGS AND RENEWABLE BRONZE SEATS

250 LBS. WORKING STEAM PRESSURE

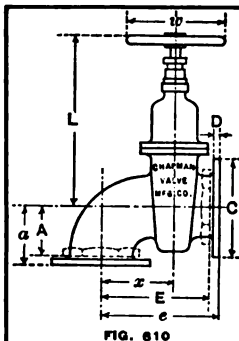


FIG. 810

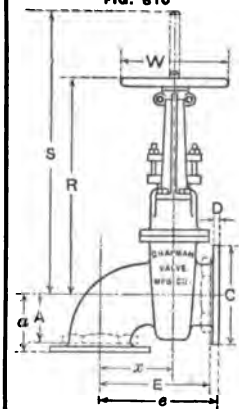


FIG. 811

		1½ IN. AND 2 IN., SCREW TOP—2½ IN. AND LARGER, BOLT TOP															
DIAMETER OF PORT		1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12	14	
A	Center to Face of Angle End, Screw End Valve	3½	3½														
E	" " " Straight " , " " "	5½	6½														
n	" " " Angle " , Flg. End Valve	3½	3½	4½	4½	5½	6	6½	7½	8½	8½	9½	10½	11½	13		
e	Center to Face of Straight End, { Without By-Pass Flange End Valve, { With By-Pass	5½	7½	8½	10	11½	11½	12½	14½	15½	16½	17½	18	19½	21		
x	Center of Angle End to Center of Spindle	2½	3½	3½	4½	5½	5½	6½	6½	7½	8½	9	9½	10½	11		
C	Diameter of End Flanges	6	6½	7½	9	9	10	10½	11	13	14	15	16	17½	20	23	
D	Thickness of End Flanges	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	2	
L	Height to Wheel, Ins. Screw Valve	9½	10½	12½	13½	13½	15½	17½	20½	22½	24½	26½	29½	31½	35½	37½	
w	Diameter of Wheel, " " "	6	7	8½	10	10	12	12	13	14	14	15	16	18	18	20	
R	Height to Wheel, Outside Screw Valve	9	10½	13½	15½	16½	18	20½	24½	28½	31½	35½	37½	41½	46½	50½	
S	Height to Spindle when open, " " "	11½	13½	15½	19½	21½	23½	26½	31½	36½	40½	45½	48½	53½	60½	65½	
W	Diameter of Wheel, " " "	6	7	10	10	12	12	13	14	15	16	16	18	18	20	20	
No. of Bolts, End Flange Drilling, 2 up		4	5	6	6	7	8	8	9	10	12	12	13	15	18	18	
Diameter of Bolts, " " "		½	½	½	½	½	½	½	½	½	½	½	½	½	½	1	
Diameter Bolt Circle, " " "		4½	5	5½	6½	7½	7½	8½	9½	10½	11½	13	14	15½	17½	20½	
Outside Diameter of Tongue on End Flanges		3½	4½	4½	5½	5½	6½	6½	7½	8½	9½	10½	11½	13½	15½	17½	
Inside Diameter of Tongue on End Flanges		2½	3½	3½	4½	4½	5½	5½	6½	7½	8½	9½	10½	11½	13½	15½	
Height of Tongue		½	½	½	½	½	½	½	½	½	½	½	½	½	½	½	
Size of By-Pass Valve									1½	1½	1½	1½	1½	1½	2	2	
Center of Main Valve Spindle to Center of By-Pass									10½	11½	11½	12½	13½	13½	6½	10½	

CHAPMAN VALVE MANUFACTURING CO.

**LIST NO. 45**  
**DIMENSIONS OF HEAVY IRON BODY RENEWABLE BRONZE SEAT DOUBLE BLOW-OFF VALVES**  
 1½ IN. TO 2 IN.—160 LBS. WORKING PRESSURE      2½ IN. TO 4 IN.—125 LBS. WORKING PRESSURE

				SCREW TOP			BOLT TOP			
DIAMETER OF PORT				1½	1½	2	2½	3	3½	4
B	Length over all, Straight Pattern, Fig. 612			9½	10½	11½	15½	16½	17½	18½
e	Center to Face of Straight End, Angle Pattern, Fig. 613					11½	14½	16	17½	18½
a	" " Angle End, " " " 613					3½	3½	4½	4½	5½
C	Diameter of End Flanges			4½	5	6	7	7½	8½	9
D	Thickness of End Flanges			½	¾	¾	1½	¾	¾	¾
L	Height to Wheel, Ins. Scr. Valve			6½	7½	8½	11½	12½	13½	14½
w	Diameter of Wheel, " " "			4	4½	5	6	7	8	8½
R	Height to Wheel, Outs. Scr. Valve						12½	13½	15½	17½
S	Height to Spindle when open, " " "						15½	17½	20½	22½
W	Diameter of Wheel, " " "						7	8	8½	8½
Number of Bolts, End Flange Drilling, 2 up					4	4	4	4	4	4
Diameter of Bolts, " " "					½	¾	¾	¾	¾	¾
Diameter Bolt Circle, " " "					3½	4½	5½	6	7	7½

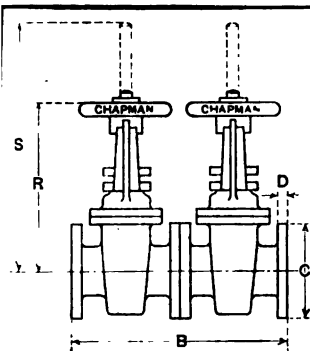


FIG. 612

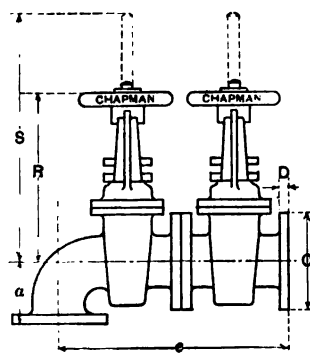


FIG. 613

**DIMENSIONS OF EXTRA HEAVY IRON BODY BRONZE SEAT DOUBLE BLOW-OFF VALVES**  
**BRONZE MOUNTINGS AND RENEWABLE BRONZE SEATS**  
**250 LBS. WORKING PRESSURE**

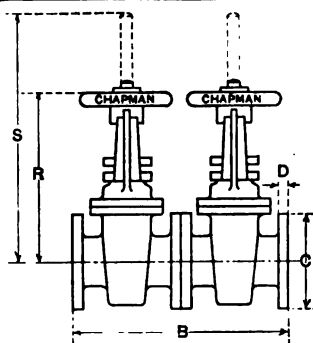


FIG. 614

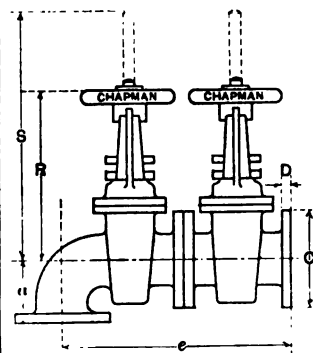


FIG. 615

		DIAMETER OF PORT							
		SCREW TOP				BOLT TOP			
		1½	1½	2	2½	3	3½	4	
B	Length over all, Straight Pattern, Fig. 614	11	12½	17	19	22½	23½	24	
e	Center to Face of Straight End, Angle Pattern, Fig. 615		11½	15½	18	21½	23½	23½	
a	" " Angle End, " " " 615		3½	3½	4½	4½	5½	6	
C	Diameter of End Flanges	5	6	6½	7½	9	9	10	
D	Thickness of End Flanges	½	1½	1½	1½	1½	1½	1½	
L	Height to Wheel, Ins. Scr. Valve	8½	9½	10½	12½	13½	13½	15½	
w	Diameter of Wheel, " " "	5	6	7	8½	10	10	11½	
R	Height to Wheel, Outs. Scr. Valve	8½	9	10½	13½	15½	16½	18	
S	Height to Spindle when open, " " "	10½	11½	13½	15½	19½	21½	23½	
W	Diameter of Wheel, " " "	5	6	7	8½	10	10	11½	
Number of Bolts, End Flange Drilling, 2 up		4	4	5	6	6	7	8	
Diameter of Bolts, " " "		½	½	½	½	¾	¾	¾	
Diameter Bolt Circle, " " "		3½	4½	5	5½	6½	7½	7½	

CHAPMAN VALVE MANUFACTURING CO.

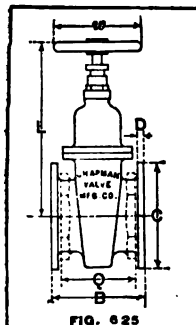


FIG. 625

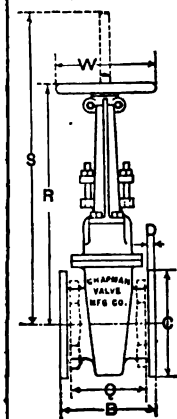


FIG. 626

FORMER TABLES NOS. 5 AND 12

DIMENSIONS OF ALL-IRON BABBITT SEAT GATE VALVES FOR GAS

SCREW OR FLANGE ENDS

MAXIMUM TEMPERATURE 325° F.M.

LIST NO. 51

		SCREW TOP										BOLT TOP							
DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	8	
Q	Length Screw End Valve	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{3}{4}$	$3\frac{1}{8}$	$3\frac{1}{2}$	$4\frac{1}{4}$	$4\frac{1}{2}$	$5\frac{1}{4}$	$6\frac{1}{8}$	8	$8\frac{1}{4}$	$9\frac{1}{2}$	$9\frac{1}{2}$	$9\frac{3}{4}$	$10\frac{1}{8}$	$11\frac{1}{4}$	12	
B	Length Flange End Valve	$2\frac{1}{8}$	$2\frac{1}{8}$	$3\frac{1}{4}$	$3\frac{3}{4}$	$4\frac{1}{4}$	$4\frac{3}{4}$	$5\frac{1}{4}$	$5\frac{3}{4}$	$7\frac{1}{8}$	$8\frac{1}{2}$	$8\frac{3}{4}$	$9\frac{1}{4}$	$9\frac{1}{2}$	$9\frac{3}{4}$	$10\frac{1}{8}$	$10\frac{3}{4}$	$10\frac{3}{4}$	
C	Diameter of End Flanges	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3	4	$4\frac{1}{2}$	5	6	7	7	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	11	12	13	
D	Thickness of End Flanges	$\frac{5}{16}$	$\frac{7}{16}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{11}{8}$	$\frac{11}{8}$	$\frac{3}{2}$	$\frac{3}{2}$	$1\frac{1}{8}$	
L	Hgt. to Wheel, Ins. Scr. Val.	$4\frac{3}{8}$	$4\frac{3}{8}$	$4\frac{11}{8}$	$5\frac{7}{8}$	$6\frac{1}{8}$	$6\frac{3}{8}$	$7\frac{1}{8}$	$9\frac{1}{8}$						$17\frac{7}{8}$	$19\frac{1}{8}$	$22\frac{1}{8}$	$23\frac{1}{8}$	
w	Diam. of Wheel, " " "	$2\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{5}{8}$	$3\frac{1}{8}$	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	$8\frac{1}{2}$	$8\frac{1}{2}$	$8\frac{1}{2}$	10	10	12	12	13	
R	Hgt. to Wheel, Outs. Scr. Val.										$14\frac{3}{8}$		$17\frac{1}{8}$		$20\frac{1}{8}$	$23\frac{1}{8}$	$28\frac{1}{8}$	$30\frac{1}{8}$	
S	Hgt. to Spindle, " " "										$18\frac{1}{2}$		$23\frac{5}{8}$		$27\frac{1}{2}$	$31\frac{1}{4}$	$37\frac{1}{2}$	$40\frac{1}{8}$	
W	Diam. of Wheel, " " "									8	$8\frac{1}{2}$	10	10	12	12	13	14	15	
No. of Bolts, End Flg. D'l'g						4	4	4	4	4	4	4	4		4	5	5	6	
Diam. of Bolts, " " "						$\frac{7}{16}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	
Bolt Circle, " " "						3	$3\frac{3}{8}$	$3\frac{3}{8}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{8}$	$7\frac{1}{8}$		$8\frac{1}{8}$	$9\frac{1}{8}$	$10\frac{1}{2}$	$11\frac{1}{4}$	

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

FORMER TABLE NO. 12

## DIMENSIONS OF ALL-IRON BABBITT SEAT GATE VALVES FOR GAS

SCREW OR FLANGE ENDS

MAXIMUM TEMPERATURE 325° FAH.

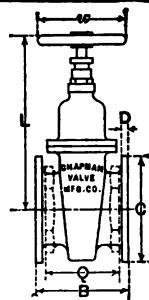


FIG. 627

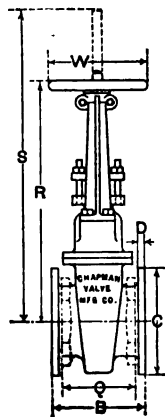


FIG. 628

		BOLT TOP																
DIAMETER OF PORT		9	10	12	14	15	16	18	20	22	24	26	28	30	36	40	42	48
Q	Length Screw End Valve																	
B	Length Flange End Valve	11½	12½	12½	14	15½	16½	18	19	19½	20	22		27½	29½	30	30	37½
C	Diameter of End Flanges	15	16	18	21	22	23	25	27	29	31	35		40	44	49	51	59
D	Thickness of End Flanges	⅞	1½	1	1½	1½	1½	1½	1½	1½	1½	1½		1½	1½	2½	2½	2½
L	Hgt. to Wheel, Ins. Scr. Val.	26½	27½	31½	36½	38½	39	43½	46½	50½	53½	58½		67½	78½			
w	Diam. of Wheel, " " "	14	14	16	18	18	18	22	22	22	24	24		30	36			
R	Hgt. to Wheel, Outs. Scr. Val.	35½	37½	43½	49½	53½	55½	61½	67½	72	77½							
S	Hgt. to Spindle, " " "	46½	49½	57½	65½	71½	73½	82½	90½	97	104½							
W	Diam. of Wheel, " " "	15	16	18	20	22	22	24	24	24	30							
No. of Bolts, End. Flg. D'lg		7	7	8	9	10	10	12	12		16			18	20			28
Diam. of Bolts, " " "		⅝	⅝	⅝	¾	¾	¾	¾	¾	¾	¾			1	1			1½
Bolt Circle, " " "		12½	14	16	18½	19½	20½	22½	24½		28½			36½	41½			55½

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 13

DIMENSIONS OF ALL-IRON BABBITT SEAT GATE VALVES FOR GAS

BELL OR SPIGOT ENDS

MAXIMUM TEMPERATURE 325° FAH.

LIST NO. 52

DIAMETER OF PORT		2	3	4	5	6	7	8	9	10	12	14	15
g	End to End of Bell	9 $\frac{5}{8}$	10 $\frac{1}{8}$	12	12 $\frac{3}{8}$	13 $\frac{1}{2}$	14	15 $\frac{1}{8}$	15 $\frac{3}{8}$	16	17 $\frac{1}{2}$	17 $\frac{3}{4}$	19 $\frac{1}{2}$
h	End to End of Pipe in Line	3 $\frac{5}{8}$	4 $\frac{1}{8}$	5	4 $\frac{7}{8}$	5 $\frac{9}{8}$	6	6 $\frac{1}{8}$	6 $\frac{3}{8}$	7 $\frac{1}{8}$	7 $\frac{3}{8}$	8 $\frac{1}{4}$	10
i	Diameter of Bell Socket	3 $\frac{5}{8}$	4 $\frac{1}{4}$	5 $\frac{1}{4}$	6 $\frac{1}{8}$	8	9 $\frac{1}{8}$	10	11	12 $\frac{1}{8}$	14 $\frac{1}{4}$	16 $\frac{3}{4}$	17 $\frac{1}{2}$
j	Depth of Bell Socket	3	3 $\frac{1}{8}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	4	4	4 $\frac{1}{4}$	4 $\frac{1}{2}$	4 $\frac{5}{8}$	4 $\frac{3}{4}$	4 $\frac{3}{4}$	4 $\frac{3}{4}$
	End to End of Spigot												
	Outside Diam. of Spigot												
l	Height to Nut, Ins. Scr. Valve	12	18 $\frac{1}{8}$	19 $\frac{1}{2}$	18 $\frac{9}{16}$	20 $\frac{3}{8}$	23 $\frac{1}{8}$	24 $\frac{3}{8}$	28	28 $\frac{3}{8}$	32 $\frac{3}{4}$	37 $\frac{9}{16}$	39 $\frac{1}{2}$
	Side of Square Nut	2	2	2	2	2	2	2	2	2	2	2	2
DIAMETER OF PORT CONTINUED		16	18	20	22	24	26	28	30	36	40	42	48
g	End to End of Bell	18 $\frac{3}{4}$	19 $\frac{1}{2}$	20 $\frac{1}{2}$	21 $\frac{1}{2}$	21 $\frac{1}{2}$	22 $\frac{7}{8}$		25	26 $\frac{1}{2}$	29	29	31
h	End to End of Pipe in Line	8 $\frac{3}{4}$	9 $\frac{1}{8}$	10 $\frac{1}{8}$	11 $\frac{1}{2}$	11 $\frac{1}{2}$	12 $\frac{7}{8}$		15	16 $\frac{1}{4}$	18 $\frac{1}{2}$	18 $\frac{1}{2}$	20
i	Diameter of Bell Socket	18 $\frac{3}{4}$	20 $\frac{1}{4}$	23	25	27	28 $\frac{5}{8}$		33	39 $\frac{1}{4}$	44	46 $\frac{1}{4}$	52 $\frac{1}{4}$
j	Depth of Bell Socket	5	5	5	5	5	5		5	5	5 $\frac{1}{4}$	5 $\frac{1}{4}$	5 $\frac{1}{4}$
	End to End of Spigot												
	Outside Diam. of Spigot												
l	Height to Nut, Ins. Scr. Valve	40 $\frac{3}{8}$	46 $\frac{1}{2}$	49 $\frac{7}{8}$	53	56 $\frac{1}{2}$	61						
	Side of Square Nut	2	2	2	2	2	2		2	2	2	2	2

For Dimensions of Geared Valves see DIMENSIONS OF GEARING

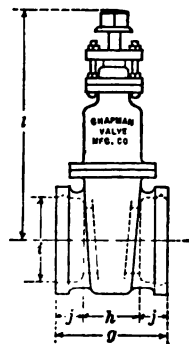


FIG. 629



CHAPMAN VALVE MANUFACTURING CO.

LIST No. 53

DIMENSIONS OF ALL-IRON BABBITT SEAT " METER " GATE VALVES FOR GAS  
BELL OR SPIGOT ENDS

MAXIMUM TEMPERATURE 325° FAH.

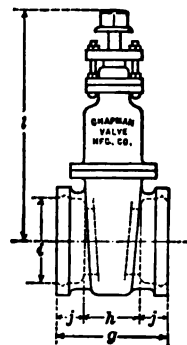


FIG. 890

DIAMETER OF PORT		3	4	5	6	7	8	9	10	12
g	End to End of Bell	15	15½		16½		17½		17½	20½
h	End to End of Pipe in Line	7	7½		8½		9½		9½	12½
i	Diam. of Bell Socket	4½	5½		8		10		12½	14½
j	Depth of Bell Socket	4	4		4		4		4	4
	End to End of Spigot									
	Outside Diameter of Spigot									
1	Height to Nut, Ins. Scr. Valve	18½	19½		20½		24½		28½	32½
	Side of Square Nut	2	2	2	2	2	2	2	2	2
	Size of Pipe Tap for Meter Pipes	¾	¾		¾		¾		¾	¾
	Center to Center of Meter Pipes in Line	5½	5½		6½		7½		8½	9½

Larger sizes furnished if desired.

DIMENSIONS OF IRON BODY BABBITT SEAT ANGLE GATE VALVES FOR GAS

MAXIMUM TEMPERATURE, 325° FAH.

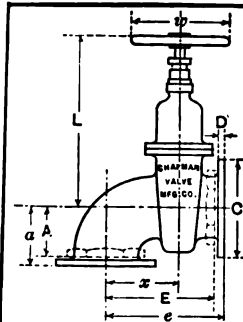


FIG. 631

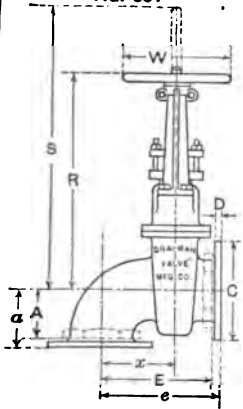


FIG. 632

		SCREW TOP								BOLT TOP			
DIAMETER OF PORT		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
A	Cen. to Face of Angle End, Scr. End Valve				1 1/4				3 7/8				
E	" " Straight " , " " "				3				5 1/4				
a	" " Angle " , Flg. End Valve								3 3/8				
e	" " Straight " , " " "								6				
x	Cen. of Angle End to Cen. of Spindle				1 5/8				2 1/8				
C	Diameter of End Flanges	2 1/2	2 1/2	3	3	4	4 1/2	5	6	7	7	8 1/2	9
D	Thickness of End Flanges	5/16	5/16	3/8	3/8	7/16	1/2	9/16	5/8	5/8	5/8	5/8	3/4
L	Height to Wheel, Ins. Scr Valve	4 3/8	4 3/8	4 13/16	5 7/16	6 1/8	6 7/8	7 1/8	9 1/8				
w	Diameter of Wheel, " " "	2 3/8	2 3/8	2 3/4	3 1/8	3 1/2	4	4 1/2	5	6	8 1/2	8 1/2	8 1/2
R	Height to Wheel, Outs. Scr. Valve										14 3/8		17 13/16
S	Height to Spindle when open, " " "										18 1/2		23 5/8
W	Diameter of Wheel, " " "									8	8 1/2	10	10
Number of Bolts, End Flange Drilling, 2 up						4	4	4	4	4	4	4	4
Diameter of Bolts, " " "						7/16	7/16	1/2	1/2	1/2	1/2	1/2	1/2
Diam. Bolt Circle, " " "						3	3 3/8	3 7/8	4 1/2	5 1/2	5 1/2	6 1/8	7 1/8

## DIMENSIONS OF IRON BODY BABBITT SEAT ANGLE GATE VALVES FOR GAS

MAXIMUM TEMPERATURE, 325° FAH.

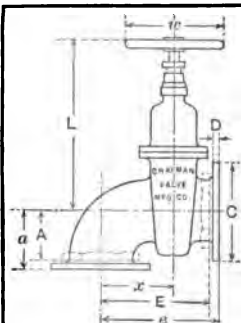


FIG. 633

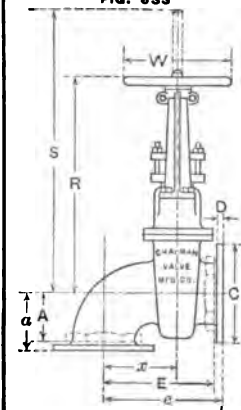


FIG. 634

DIAMETER OF PORT		4½	5	6	7	8	9	10	12	14	15	16	18
A	Cen. to Face of Angle End, Scr. End Valve												
E	" " Straight " , " " "												
a	" " Angle " , Flg. End Valve					9½		10½	11½	13½		15	
e	" " Straight " , " " "					13½		15½	16½	19½		21½	
x	Cen. of Angle End to Cen. of Spindle					8		9½	10½	12½		13½	
C	Diameter of End Flanges	9½	10	11	12	13	15	16	18	21	22	23	25
D	Thickness of End Flanges	1½	1½	¾	¾	1½	¾	1½	1	1½	1½	1½	1½
L	Height to Wheel, Ins. Scr. Valve		17½	19½	22½	23½	26½	27½	31½	36½	38½	39	43½
w	Diameter of Wheel, " " "	10	10	12	12	13	14	14	16	18	18	18	22
R	Height to Wheel, Outs. Scr. Valve		20½	23½	28½	30½	35½	37½	43½	49½	53½	55½	61½
S	Height to Spindle when open, " " "		27½	31½	37½	40½	46½	49½	57½	65½	71½	73½	82½
W	Diameter of Wheel, " " "	12	12	13	14	15	15	16	18	20	22	22	24
Number of Bolts, End Flange Drilling, 2 up			4	5	5	6	7	7	8	9	10	10	12
Diameter of Bolts, " " "			½	½	¾	¾	¾	¾	¾	¾	¾	¾	¾
Diam. Bolt Circle, " " "			8½	9½	10½	11½	12½	14	16	18½	19½	20½	22½

For Dimensions of Geared Valves See DIMENSIONS OF GEARING

CHAPMAN VALVE MANUFACTURING CO.

FORMER TABLE NO. 5

DIMENSIONS OF SEMI-STEEL BABBITT SEAT GATE VALVES FOR AMMONIA  
100 LBS. WORKING PRESSURE

LIST NO. 60

MAXIMUM TEMPERATURE 325° FAH.

DIMENSIONS OF ALL-IRON GATE VALVES WITH IRON SEATS FOR ALKALIES, ETC.  
200 LBS. WORKING PRESSURE

LIST NO. 56

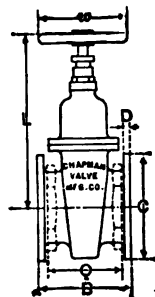


FIG. 650

		SCREW TOP										BOLT TOP							
DIAMETER OF PORT		$\frac{1}{4}$ & $\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	8	9	10
Q	Length Screw End Valve	$2\frac{1}{8}$	$2\frac{3}{8}$	$3\frac{1}{8}$	$3\frac{3}{8}$	$4\frac{1}{8}$	$4\frac{3}{8}$	$5\frac{1}{8}$	$6\frac{1}{8}$	$7\frac{1}{8}$	$8\frac{1}{8}$	$9\frac{1}{8}$	$9\frac{3}{8}$	$10\frac{1}{8}$	$11\frac{1}{8}$	$12\frac{1}{8}$	$12\frac{3}{8}$	$13\frac{1}{8}$	$13\frac{3}{8}$
B	Length Flange End "	$2\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{3}{8}$	$4\frac{1}{8}$	$4\frac{3}{8}$	$5\frac{1}{8}$	$5\frac{3}{8}$	$7\frac{1}{8}$	$8\frac{1}{8}$	$8\frac{3}{8}$	$9\frac{1}{8}$	$10\frac{1}{8}$	$9\frac{3}{8}$	$10\frac{3}{8}$	$11\frac{1}{8}$	$11\frac{3}{8}$	$12\frac{1}{8}$	$13\frac{1}{8}$
C	Diameter of End Flanges	$2\frac{1}{2}$	3	3	4	$4\frac{1}{2}$	5	6	7	7	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	11	12	13	15	16
D	Thickness of End Flanges	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	1	$1\frac{1}{8}$	$1\frac{3}{8}$
L	Height to Wheel	$4\frac{1}{8}$	$4\frac{3}{8}$	$5\frac{1}{8}$	$6\frac{1}{8}$	$6\frac{3}{8}$	$7\frac{1}{8}$	$9\frac{1}{8}$	$11\frac{1}{8}$	$12\frac{1}{8}$	$13\frac{1}{8}$	$14\frac{1}{8}$	17	$19\frac{1}{8}$	$21\frac{1}{8}$	24			
w	Diameter of Wheel	$2\frac{1}{8}$	$2\frac{3}{8}$	$3\frac{1}{8}$	$3\frac{3}{8}$	4	$4\frac{1}{2}$	5	6	7	8	$8\frac{1}{2}$	10	10	12	13	14	14	15
No. of Bolts, End Flg. Dlg, 2 up					4	4	4	4	4	5	5	5	6	6	6	8	8	9	10
Diam. of Bolts, End Flg. Dlg.					$\frac{7}{8}$	$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	
Bolt Circle, " " "					3	$3\frac{3}{8}$	$3\frac{3}{8}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$5\frac{1}{2}$	7	$7\frac{1}{8}$	$7\frac{1}{8}$	$8\frac{3}{8}$	$9\frac{3}{8}$	$10\frac{1}{2}$	$11\frac{1}{2}$	13	14
The above dimensions apply to both Ammonia and Alkali Valves—the following dimensions apply only to Outside Screw Valves in List No. 56.																			
R	Hgt. to Wheel, Out. Scr. V									$12\frac{3}{8}$	$13\frac{3}{8}$	$15\frac{1}{8}$	$17\frac{1}{8}$	$19\frac{1}{8}$	$21\frac{1}{8}$	$25\frac{1}{8}$	$27\frac{3}{8}$	$31\frac{1}{8}$	$34\frac{1}{8}$
S	" Spindle, " "									$15\frac{3}{8}$	$17\frac{3}{8}$	$20\frac{3}{8}$	$22\frac{1}{2}$	$25\frac{3}{8}$	$27\frac{3}{8}$	$32\frac{3}{8}$	$36\frac{1}{8}$	$41\frac{1}{8}$	$45\frac{1}{8}$
W	Diam. of Wheel, " "									8	$8\frac{1}{2}$	10	10	12	12	13	14	15	16

CHAPMAN VALVE MANUFACTURING CO.

DIMENSIONS OF SEMI-STEEL BABBITT SEAT ANGLE GATE VALVES FOR AMMONIA

LIST NO. 61

100 LBS. WORKING PRESSURE

MAXIMUM TEMPERATURE 325° FAH.

DIMENSIONS OF ALL-IRON ANGLE GATE VALVES WITH IRON SEATS FOR ALKALIES, ETC.

LIST NO. 57

200 LBS. WORKING PRESSURE

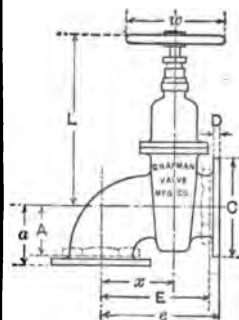


FIG. 661

		SCREW TOP							BOLT TOP		
DIAMETER OF PORT		1	2	3	4	5	6	8	10	12	14
A	Cen. to Face of Angle End, Scr. End Valve			1 1/2				3 7/8	3 1/2	4 1/2	
E	" " Straight End, " " "			3				5 1/2	6 1/8	7 1/2	
a	" " Angle End, Flg. End Valve							3 1/2	3 1/2	4 1/2	
e	" " Straight End, " " "							6	6 1/8	7 1/2	
x	Cen. of Angle End to Cen. of Spindle			1 1/8				2 1/2	3	3 1/2	
C	Diameter of End Flanges	2 1/2	2 1/2	3	3	4	4 1/2	5	6	7	7
D	Thickness of End Flanges	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
L	Height to Wheel	4 1/2	4 1/2	4 1/2	5 1/8	6 1/8	6 1/8	7 1/8	9 1/8	11 1/8	12 1/8
w	Diameter of Wheel	2 1/8	2 1/8	2 1/8	3 1/8	3 1/2	4	4 1/2	5	6	7
No. of Bolts, End Flange Drilling, 2 up					4	4	4	4	4	5	
Diam. of Bolts, " " "					7/8	7/8	1	1	1	1	
Diam. of Bolt Circle, " " "					3	3 1/2	3 1/2	4 1/2	5 1/2	5 1/2	
The above dimensions apply to both Ammonia and Alkali Valves; the following dimensions apply only to Outside Screw Valves in List No. 57											
R	Height to Wheel, Outs. Scr. Valve									12 1/2	13 1/2
S	Height to Spindle when Open, " " "									15 1/2	17 1/2
W	Diameter of Wheel, " " "									8	8 1/2

CHAPMAN VALVE MANUFACTURING CO.

**DIMENSIONS OF SEMI-STEEL BABBITT SEAT ANGLE GATE VALVES FOR AMMONIA**  
100 LBS. WORKING PRESSURE

MAXIMUM TEMPERATURE 325° FAH.

**LIST NO. 61**  
CONTINUED

**DIMENSIONS OF ALL-IRON ANGLE GATE VALVES WITH IRON SEATS FOR ALKALI, ETC.**

**LIST NO. 57**  
CONTINUED

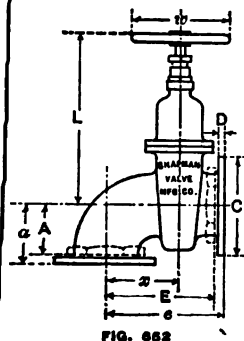


FIG. 652

		BOLT TOP									
DIAMETER OF PORT		3½	4	4½	5	6	7	8	9	10	
A	Cen. to Face of Angle End, Scr. End Valve	4½	5½	6	6½	7½	8½	9½	9½	10½	
E	" " Straight End, " " "	8½	9½	10½	11½	12½	13½	14½	15½	16½	
a	" " Angle End, Flg. End Valve	4½	5½	6	6½	7½	8½	9½	9½	10½	
e	" " Straight End, " " "	8½	9½	10½	10½	12½	13½	13½	15½	16½	
x	Cen. of Angle End to Cen. of Spindle	4½	4½	5½	6½	7½	8	8½	9½		
C	Diameter of End Flanges	8½	9	9½	10	11	12	13	15	16	
D	Thickness of End Flanges	2½	2½	2½	2½	2½	2½	1	1½	1½	
L	Height to Wheel	13½	14½	17	19½	21½	24				
w	Diameter of Wheel	8	8½	10	10	12	13	14	15	16	
No. of Bolts, End Flange Drilling, 2 up		5	5	6	6	6	8	8	9	10	
Diam. of Bolts, " " "		½	½	½	½	½	½	¾	¾	¾	
Diam. of Bolt Circle, " " "		7	7½	7½	8½	9½	10½	11½	13	14	
The above dimensions apply to both Ammonia and Alkali Valves; the following dimensions apply only to Outside Screw Valves in List No. 57											
R	Height to Wheel, Outs. Scr. Valve	15½	17½	19½	21½	25½	27½	31½	34½	37½	
S	Height to Spindle when Open, " " "	20½	22½	25½	27½	32½	36½	41½	45½	50½	
W	Diameter of Wheel, " " "	10	10	12	12	13	14	15	15	16	

## DIMENSIONS OF EXTRA HEAVY SEMI-STEEL BABBITT SEAT GATE VALVES FOR AMMONIA

300 LBS. WORKING PRESSURE

MAXIMUM TEMPERATURE, 325° F.M.

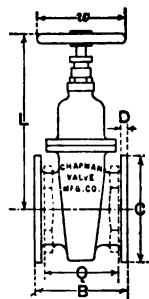


FIG. 653

		SCREW TOP								BOLT TOP									
DIAMETER OF PORT		1 1/8	1 1/2	2	3	4	5	6	8	10	12	14	16	18	20	24	30	36	48
Q	Length Screw End Valve	3 1/2	3 1/2	4 1/2	4 1/2	5 1/2	6	7	8 1/2	9 1/2	9 1/2	10	11 1/2	12 1/2	13 1/2	14 1/2	15		
B	Length Flange End Valve	3 1/2	4 1/2	5	5 1/2	6 1/2	8 1/2	9 1/2	11 1/2	11 1/2	12	13 1/2	15	15 1/2	16 1/2	16 1/2	17	18	
C	Diameter of End Flanges	3	3	4	4 1/2	5	6	6 1/2	7	8	8 1/2	9	9 1/2	10 1/2	12	13	14	15	17
D	Thickness of End Flanges	1 1/8	1 1/2	1 3/8	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4
L	Height to Wheel		6 1/2	7 1/2	7 1/2	8 1/2	9 1/2	10 1/2	12 1/2	13 1/2	13 1/2	15 1/2	17 1/2	20 1/2	22 1/2	24 1/2	26 1/2	28 1/2	31 1/2
w	Diameter of Wheel	3 1/2	4	4 1/2	5	5	6	7	8 1/2	10	10	12	12	13	14	14	15	16	18
No. of Bolts, End Flg. Drlg.			4	4	4	4	4	5	6	6	7	8	8	9	10	11	12	13	15
Diam. of Bolts, " " "			7/8	1	1	1	1	1	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Diam. Bolt Circle " " "			2 1/2	2 1/2	3 1/2	3 1/2	4 1/2	5	5 1/2	6 1/2	6 1/2	7 1/2	7 1/2	8 1/2	10	11 1/2	12 1/2	13 1/2	14 1/2
Outside Diam. of Tongue on End Flanges			1 1/2	2 1/2	2 1/2	3	3 1/2	4 1/2	4 1/2	5 1/2	5 1/2	6 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	13 1/2
Inside Diam. of Tongue on End Flanges			7/8	1 1/8	1 1/8	2 1/8	2 1/2	3 1/8	3 1/2	4 1/8	4 1/2	5 1/8	5 1/2	6 1/8	7 1/2	8 1/8	9 1/8	10 1/8	11 1/8
Height of Tongue on End Flgs			3/8	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 64

DIMENSIONS OF EXTRA HEAVY SEMI-STEEL BABBITT SEAT ANGLE GATE VALVES FOR AMMONIA

300 LBS. WORKING PRESSURE

MAXIMUM TEMPERATURE 325° FAH.

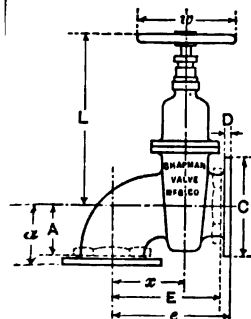


FIG. 634

		SCREW TOP								BOLT TO	
DIAMETER OF PORT		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
A	Center to Face of Angle End, Scr. End Valve			$1\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{3}{8}$	$2\frac{1}{2}$	$3\frac{1}{4}$	$3\frac{1}{2}$	$4\frac{1}{4}$	$4\frac{7}{8}$
E	" " " Straight " " " "			$3\frac{1}{8}$	$3\frac{3}{8}$	$4\frac{1}{8}$	$4\frac{3}{8}$	$5\frac{1}{8}$	$6\frac{1}{8}$	$7\frac{1}{8}$	$9\frac{1}{8}$
a	Center to Face of Angle End, Flg. End Valve			2	$2\frac{3}{8}$	$2\frac{7}{8}$	$2\frac{1}{2}$	$3\frac{1}{4}$	$3\frac{1}{2}$	$4\frac{1}{4}$	$4\frac{7}{8}$
e	" " " Straight " " " "			$3\frac{3}{8}$	$3\frac{1}{2}$	$4\frac{7}{8}$	$4\frac{1}{2}$	$5\frac{3}{8}$	$7\frac{1}{8}$	$8\frac{1}{2}$	10
x	Center of Angle End to Center of Spindle			$1\frac{1}{4}$	$1\frac{7}{8}$	$1\frac{3}{4}$	2	$2\frac{1}{4}$	$3\frac{1}{8}$	$3\frac{3}{4}$	$4\frac{7}{8}$
C	Diameter of End Flanges			3	4	$4\frac{1}{2}$	5	6	$6\frac{1}{2}$	7	8
D	Thickness of End Flanges			$\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$1\frac{1}{8}$
L	Height to Wheel			$6\frac{3}{8}$	$7\frac{3}{8}$	$7\frac{1}{8}$	$8\frac{1}{8}$	$9\frac{1}{8}$	$10\frac{1}{8}$	$12\frac{1}{8}$	$13\frac{1}{8}$
w	Diameter of Wheel			4	$4\frac{1}{2}$	5	5	6	7	$8\frac{1}{2}$	10
No. of Bolts, End Flange Drilling, 2 up				4	4	4	4	4	5	6	6
Diam. of Bolts, " " "				$\frac{7}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{4}$
Diam. Bolt Circle, " " "				$2\frac{1}{8}$	$2\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{1}{8}$	$4\frac{1}{8}$	5	$5\frac{1}{8}$	$6\frac{1}{8}$
Outside Diam. of Tongue on End Flanges				$1\frac{1}{2}$	$2\frac{1}{8}$	$2\frac{1}{2}$	3	$3\frac{1}{2}$	$4\frac{1}{8}$	$4\frac{1}{4}$	$5\frac{1}{4}$
Inside Diam. of Tongue " " "				$\frac{1}{2}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$2\frac{1}{8}$	$2\frac{1}{2}$	$3\frac{1}{8}$	$3\frac{1}{4}$	$4\frac{1}{4}$
Height of Tongue " " "				$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$



**DIMENSIONS OF EXTRA HEAVY SEMI-STEEL ANGLE GATE VALVES FOR AMMONIA**  
**300 LBS. WORKING PRESSURE**

**MAXIMUM TEMPERATURE 325° FAH.**

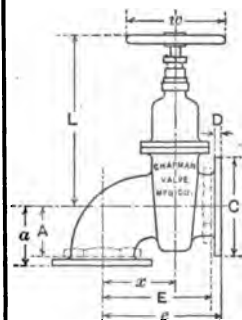


FIG. 655

			BOLT TOP									
DIAMETER OF PORT			3½	4	4½	5	6	7	8	9	10	12
A	Center to Face of Angle End,	Scr. End Valve	5½	6								
E	“ “ “ Straight “	“ “ “	10¾	10¾								
a	Center to Face of Angle End,	Flg. End Valve	5½	6	6¾	7½	8½	8¾	9¾	10½	11½	
e	“ “ “ Straight “	“ “ “	11¾	11¾	12½	14½	15¾	16½	17½	18	19½	
x	Center of Angle End to Center of Spindle		5½	5½	6½	6½	7½	8½	9	9½	10½	
C	Diameter of End Flanges		8½	9	9½	10½	12	13	14	15	17	
D	Thickness of End Flanges		1¾	1½	1¾	1¾	1¾	1¾	1½	1¾	1¾	
L	Height to Wheel		13½	15½	17½	20½	22½	24½	26½	29½	31½	
w	Diameter of Wheel		10	12	12	13	14	14	15	16	18	
No. of Bolts, End Flange Drilling, 2 up			7	8	8	9	10	11	12	13	15	
Diameter of Bolts, “ “ “			¾	¾	¾	¾	¾	¾	¾	¾	¾	
Diameter Bolt Circle, “ “ “			6½	7½	7½	8½	10	11½	12½	13½	14½	
Outside Diam. of Tongue on End Flanges			5½	6½	6½	7½	8½	9½	10½	11½	13½	
Inside Diam. of Tongue “ “ “			4½	5½	5½	6½	7½	8½	9½	10½	11½	
Height of Tongue “ “ “			¾	¾	¾	¾	¾	¾	¾	¾	¾	

# CHAPMAN VALVE MANUFACTURING CO.

NUMBER OF TURNS REQUIRED TO OPEN REGULAR CHAPMAN VALVES*																												
SIZE OF VALVES		2	2½	3	3½	4	4½	5	6	7	8	9	10	12	14	15	16	18	20	22	24	26	28	30	36	40	42	48
LIST NUMBER OF VALVES		NUMBER OF TURNS TO OPEN																										
21, 23, 24 and 26	Not Geared	10	9	10	12	14	16	18	28	24	28	20	23	27	32	50	53	60	66	72	78	83		81	96	87	91	102
	Spur Geared																106	120	140	153	165	180		167	198	179	188	306
	Bevel Geared																106	120	132	144	156	170		243	288	261	293	306
22 and 25	Not Geared			10		14		18	28	24	28	31	34	41	47	50	53	60	66	72	78	85		81	96	87	91	102
	Spur Geared																106	120	140	153	165	180		167	198	179	188	306
	Bevel Geared																106	120	132	144	156	170		243	288	261	293	306
27, 28, 29, 31, 41, 42, 45	Not Geared	10	9	10	12	14	21	24	21	24	19	20	23	27	47	51	54	60	66	72	66	71		81	77	87	91	102
	Spur Geared																106	127	140	153	136	146		167	159	261	273	306
	Bevel Geared																106	120	132	144	198	211		243	231	261	273	306
30	Not Geared	7		11		20		21	21	24	28	31	34	41	47	51	54	60	66	72	66	71		81	77	87	91	102
	Spur Geared																106	127	140	153	136	146		167	198	261	273	306
	Bevel Geared																106	120	132	144	198	211		243	231	261	273	306
32, 33, 43, 44, 46	Not Geared	7	9	11	12	18	16	18	21	24	28	31	34	41	47	51	54	60	55	61	66							
	Spur Geared																											
	Bevel Geared																											
51, 52, 53, 54	Not Geared		9	7	12	10	8	9	11	12	14	15	17	20	24	25	26	20	22	24	26	28		33	39			
	Spur Geared																52	40	47	51	55	59		68	78			
	Bevel Geared																52	40	44	48	53	56		96	117			

\*Can furnish Valves arranged to open in greater or less number of turns than regular if desired

## DIMENSIONS OF HEAVY CAST IRON FLANGES AND FLANGE UNIONS FOR STEAM AND WATER

TO MATCH VALVES IN LISTS 21, 23, 24, 26, 27, 28, 29, 31, 41, 42 AND 45

2 IN. AND SMALLER—160 LBS. WORKING STEAM PRESSURE

2½ IN. AND LARGER—125 LBS. WORKING STEAM PRESSURE

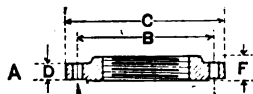


FIG. 681

PIPE SIZE		1	1½	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12	14	15
C	Diameter of Flange	4	4½	5	6	7	7½	8½	9	9½	10	11	12½	13½	15	16	19	21	22½
D	Thickness of Flange				½	¾	¾	1½	1½	1½	1½	1½	1½	1	1½	1½	1½	1½	1½
F	Length of Thread				1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	2	2½	2½
B	Diam. of Bolt Circle	3	3½	3½	4½	5½	6	7	7½	7½	8½	9½	10½	11½	13½	14½	17	18½	20
Length of Union along Pipe					2½	2½	2½	2½	3	3	3	3½	3½	3½	3½	4	4½	4½	5
Number of Bolts		4	4	4	4	4	4	4	4	8	8	8	8	8	12	12	12	12	16
Diameter of Bolts for Valves in Lists 21 and 23		7/8	7/8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Diameter of Bolts for Valves in Lists 24, 26, 27, 28, 29, 31, 41, 42 and 45		7/8	7/8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

# CHAPMAN VALVE MANUFACTURING CO.

## DIMENSIONS OF EXTRA HEAVY CAST IRON SCREWED COMPANION FLANGES FOR WATER TO MATCH VALVES IN LISTS 32 AND 33

LIST NO. 69

4 IN. AND LESS—600 LBS. WORKING PRESSURE

5 IN. TO 9 IN.—450 LBS. WORKING PRESSURE

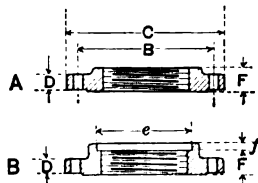
10 IN. TO 16 IN.—350 LBS. WORKING PRESSURE

## DIMENSIONS OF EXTRA HEAVY SEMI-STEEL SCREWED COMPANION FLANGES FOR AMMONIA

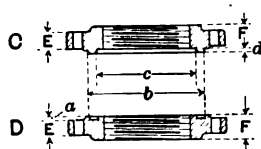
LIST NO. 72

TO MATCH VALVES IN LISTS 62 AND 64

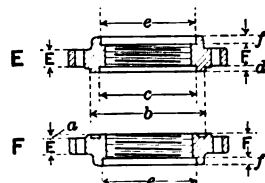
300 LBS. WORKING PRESSURE



FIGS. 663 AND 664



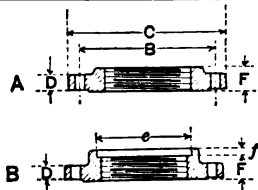
FIGS. 665 AND 666



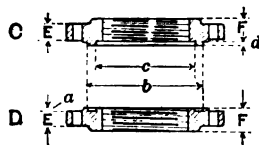
FIGS. 667 AND 668

SIZE OF PIPE		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12	14	15
C	Outside Diameter,	All Flanges																			
B	Diameter Bolt Circle,	" "																			
	Number of Bolts,	" "																			
	Diameter of Bolts,	" "																			
	Length of Thread,	" "																			
	Thickness of Plain Faced Flanges	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
	Thickness of Tongued and Grooved Flanges	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
	Diameter of Calking Seam																				
	Depth of Calking Seam																				
	Outside Diameter of Tongue	1 1/2	2 1/2	2 1/2	3	3 1/2	4 1/2	4 1/2	5 1/2	5 1/2	6 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	13 1/2	15 1/2	17 1/2	18 1/2
	Inside Diameter of Tongue	1	1 1/2	1 1/2	2 1/2	2 1/2	3 1/2	3 1/2	4 1/2	4 1/2	5 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	13 1/2	15 1/2	17 1/2
	Height of Tongue	3/4	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
	Depth of Groove	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8

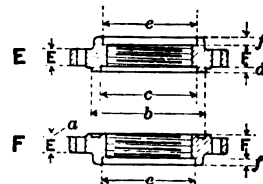
**DIMENSIONS OF EXTRA HEAVY CAST IRON SCREWED COMPANION FLANGES FOR STEAM AND WATER**  
**TO MATCH VALVES IN LISTS 43, 44 AND 46**      **250 LBS. WORKING PRESSURE**



FIGS. 669 AND 670



FIGS. 671 AND 672



FIGS. 673 AND 674

SIZE OF PIPE			INCHES																		
			1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12	14	15		
C	Outside Diameter,	All Flanges	4	4 1/2	5	6	6 1/2	7 1/2	9	9	10	10 1/2	11	13	14	15	16	17 1/2	20	23	25 1/2
B	Diameter of Bolt Circle,	" "	2 1/2	3 1/2	3 1/2	4 1/2	5	5 1/2	6 1/2	7 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	13	14	15 1/2	17 1/2	20 1/2	21 1/2
	Number of Bolts,	" "	4	4	4	4	4	6	6	7	8	8	9	10	12	12	13	15	18	18	18
	Diameter of Bolts,	" "	1/2	1/2	1/2	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	1	1
F	Length of Thread,	" "	1	1	1 1/8	1 1/2	1 1/2	1 1/8	1 1/8	1 1/2	1 1/8	1 1/2	1 1/2	1 1/2	2	2 1/8	2 1/8	2 1/8	2 1/2	2 1/2	2 1/2
D	Thickness of Plain Faced Flanges		1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
E	Thickness of Tongued and Grooved Flanges		1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
e	Diameter of Calking Seam						3 1/8	3 1/8	4 1/8	4 1/8	5 1/8	6	7	8 1/8	9	10 1/8	11 1/8	13 1/8	15 1/8	17	17
f	Depth of Calking Seam						3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
b	Outside Diameter of Tongue		2 1/2	2 1/2	3	3 1/2	4 1/2	4 1/2	5 1/2	5 1/2	6 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	13 1/2	15 1/2	17 1/2	18 1/2
c	Inside Diameter of Tongue		1 1/2	1 1/2	2 1/2	2 1/2	3 1/2	3 1/2	4 1/2	4 1/2	5 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	13 1/2	15 1/2	17 1/2
d	Height of Tongue		1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
a	Depth of Groove		1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8

CHAPMAN VALVE MANUFACTURING CO.

LIST NO. 71

DIMENSIONS OF SEMI-STEEL FLANGES AND FLANGE UNIONS FOR GAS, ALKALI AND AMMONIA

TO MATCH VALVES IN LISTS 51, 54, 56, 57, 60 AND 61

100 LBS. WORKING AMMONIA PRESSURE

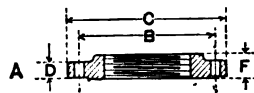


FIG. 662

PIPE SIZE

$\frac{1}{4}$   $\frac{3}{8}$   $\frac{1}{2}$   $\frac{3}{4}$  1  $1\frac{1}{4}$   $1\frac{1}{2}$  2  $2\frac{1}{2}$  3  $3\frac{1}{2}$  4  $4\frac{1}{2}$  5 6 7 8 9 10

C Diameter of Flange	$2\frac{1}{2}$	3	3	4	$4\frac{1}{2}$	5	6	7	7	$8\frac{1}{2}$	9	$9\frac{1}{2}$	10	11	12	13	15	16
D Thickness of Flange							$\frac{5}{8}$	$3\frac{1}{8}$	$\frac{3}{4}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$1\frac{5}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{8}$
F Length of Thread							$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{9}{16}$	$1\frac{9}{16}$	$1\frac{1}{2}$	$1\frac{1}{2}$	2
Length of Union along Pipe							$2\frac{3}{8}$	$2\frac{1}{2}$	$2\frac{3}{4}$	$2\frac{3}{4}$	3	3	3	$3\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{3}{8}$	$3\frac{1}{2}$	4

DRILLING FOR GAS VALVES IN LISTS 51 AND 54

Number of Bolts				4	4	4	4	4	4	4	4		4	5	5	6	7	7
Diameter of Bolts				$\frac{7}{16}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$		$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$
B Diameter of Bolt Circle				3	$3\frac{3}{8}$	$3\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{7}{8}$	$7\frac{1}{8}$		$8\frac{1}{8}$	$9\frac{1}{8}$	$10\frac{1}{2}$	$11\frac{1}{2}$	$12\frac{3}{4}$	14

DRILLING FOR ALKALI AND AMMONIA VALVES IN LISTS 56, 57, 60 AND 61

Number of Bolts				4	4	4	4	4	5	5	5	6	6	6	8	8	9	10
Diameter of Bolts				$\frac{7}{16}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	
$B \left\{ \right.$ Diameter of Bolt Circle				3	$3\frac{3}{8}$	$3\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$5\frac{1}{2}$	7	$7\frac{1}{8}$	$7\frac{3}{8}$	$8\frac{1}{8}$	$9\frac{1}{8}$	$10\frac{1}{2}$	$11\frac{1}{2}$	13	14

## DIMENSIONS OF EXTRA HEAVY SEMI-STEEL SQUARE FLANGE UNIONS FOR AMMONIA

300 LBS. WORKING PRESSURE

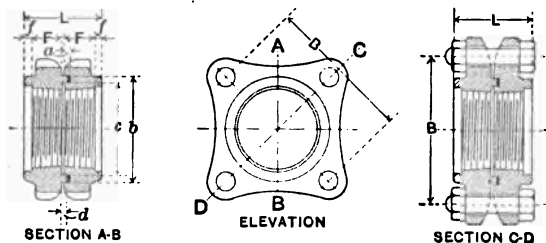


FIG. 675

PIPE SIZE		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5	6	7	8
L	Length over all—including Gasket	1 $\frac{1}{8}$	1 $\frac{3}{8}$	1 $\frac{7}{8}$	1 $\frac{5}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{4}$	2 $\frac{3}{8}$	2 $\frac{1}{2}$	3 $\frac{1}{8}$	3 $\frac{3}{8}$		3 $\frac{5}{8}$		4 $\frac{1}{8}$	4 $\frac{1}{4}$		
B	Diameter of Bolt Circle	2 $\frac{1}{8}$	2 $\frac{1}{4}$	2 $\frac{3}{8}$	3	3 $\frac{1}{4}$	3 $\frac{3}{8}$	4 $\frac{1}{8}$	4 $\frac{1}{4}$	5 $\frac{1}{8}$	6 $\frac{1}{8}$		7 $\frac{1}{8}$		9 $\frac{1}{4}$	10 $\frac{1}{4}$		
	Number of Bolts	4	4	4	4	4	4	4	4	4	4		5		6	6		
	Diameter of Bolts	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$		$\frac{3}{4}$		$\frac{3}{4}$	$\frac{3}{4}$		
F	Length of Thread, Each Flange	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	1	1	1 $\frac{1}{8}$	1 $\frac{1}{4}$		1 $\frac{3}{8}$		1 $\frac{1}{2}$	1 $\frac{3}{4}$		
f	Depth of Recess, " "	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$		$\frac{1}{8}$		$\frac{1}{8}$	$\frac{1}{8}$		
b	Outside Diameter of Tongue	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{5}{8}$	1 $\frac{7}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{4}$	2 $\frac{3}{8}$	3 $\frac{1}{8}$	3 $\frac{3}{8}$	4 $\frac{1}{8}$		5 $\frac{1}{8}$		6 $\frac{1}{8}$	7 $\frac{1}{8}$		
c	Inside Diameter of Tongue	1	1	1 $\frac{1}{8}$	1 $\frac{1}{4}$	1 $\frac{3}{8}$	2	2 $\frac{1}{8}$	2 $\frac{1}{4}$	2 $\frac{3}{8}$	3 $\frac{1}{8}$	3 $\frac{1}{4}$	5		5 $\frac{1}{8}$	6 $\frac{1}{8}$		
d	Height of Tongue	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	$\frac{1}{4}$		
a	Depth of Groove	$\frac{3}{32}$	$\frac{3}{32}$	$\frac{3}{32}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$		$\frac{1}{16}$		$\frac{1}{16}$	$\frac{1}{16}$		

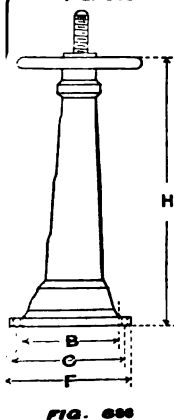
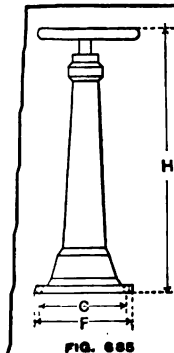
DIMENSIONS OF CAST IRON FLOOR STANDS

STATIONARY SPINDLE STANDS, FIG. 685—WITH OR WITHOUT INDICATOR

Designation of Stand		A	B	
Suitable for Valves		4½" and smaller	5" and larger	
H	Height from Floor to Top of Wheel	28½"	36"	
F	Diameter of Bottom Flange	9½"	12¾"	
Number and Size of Holes in Bottom Flange		4 — ⅞"	4 — ¾"	
C	Diam. of Bolt Circle in Bottom Flange	8½"	11½"	

RIISING SPINDLE STANDS, FIG. 686

Designation of Stand		C	E	F
Suitable for Valves		4½" and smaller	5" to 14"	15" and larger
H	Height from Floor to Top of Wheel	36"	36"	36"
B	Diameter of Base (when bolted to valve)	10"	12"	13"
F	Diameter of Bottom Flange	12¾"	15"	16"
Number and Size of Holes in Bottom Flange				
C	Diam. of Bolt Circle in Bottom Flange			









SECTION XI.

GENERAL RECOMMENDATIONS

CONCERNING THE

SELECTION OF VALVES FOR VARIOUS PURPOSES



## **GENERAL RECOMMENDATIONS CONCERNING THE SELECTION OF VALVES**

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For the convenience of engineers in making specifications and of purchasers in selecting valves for various purposes we give below some general recommendations based upon our extensive experience in this class of work. These recommendations are grouped under the several kinds of plants, WATER-WORKS SYSTEMS, STEAM POWER PLANTS, GAS PLANTS, REFRIGERATING PLANTS, ETC.

and as far as possible these recommendations are made in detail for the various kinds of valves required in each plant. The recommendations are in accord with the best modern practice and are perfectly safe to follow, except under extraordinary conditions of installation or operation; such as harsh treatment in erection, rigid pipe connections and great temperature variations, excessive water hammer from any cause, etc. It is of course impossible to make a set of recommendations which shall cover conditions out of the ordinary, as regards either unusually easy or severe service. For such cases we shall be pleased to make recommendations and quote prices upon receipt of data covering the conditions.

**CHAPMAN VALVE MANUFACTURING COMPANY**

**CHAPMAN GATE VALVES, FIRE HYDRANTS, ETC.,**  
**FOR**  
**WATER WORKS AND FIRE PROTECTION SYSTEMS**

---

**INSIDE AND  
OUTSIDE  
SCREW  
VALVES**

Both inside and outside screw valves are equally well made. For inside service, such as gate-house, pump-house and mill work, where the projecting thread is not likely to be injured, we recommend the Outside Screw valve on account of its perfect indication of the position of the plug or gate. For underground work and other positions where the projecting spindle of the outside screw valve is liable to injury, we recommend the Inside Screw valve.

**INDICATORS**

Where desirable we fit the inside screw valves with either of the indicators described and illustrated in Section VI, or provide them with the indicator post in List No. 75, showing at a glance whether the valve is OPEN OR SHUT.

**END  
CONNECTIONS**

For this class of work bell, flange and screw end connections are suitable. Ordinarily bell end connections with calked lead joints are used for cast-iron street main work. In such cases, the valves should have two bell ends.

In wrought iron, steel or cast-iron mains, where the valves are liable to be removed for any reason, flange ends are recommended. Screw end valves give good results in the smaller sizes and when so used the valves can be fitted with ground joint unions, if desired, for connection with either lead or iron pipe.

**GEARING**

In the smaller sizes gearing is used to bring the operating nut or wheel into a convenient position. In the larger sizes it is used both to secure a "gain in power" for operating and to bring the operating nut or wheel into a convenient position: bevel or miter gears being frequently used on underground valves 20 inches and larger in size on account of their height from center of port to top.

LIFTING  
CYLINDERS

In many cases it is desirable to open and close valves by means of lifting cylinders operated by either hydraulic, pneumatic or steam pressure. We are prepared to fit any of our valves for this purpose if desired.

BY-PASS

By-Passes are used to equalize or balance the pressure on both sides of a valve before opening and for convenience in filling mains to avoid the water ram which would be caused by the rapid opening of the main valve under pressure. The use of a by-pass does away with the necessity of gearing to secure a "gain in power," as under the equalized pressure the valve opens easily.

SERVICE  
CONNECTIONS

The accompanying sketch shows a typical service connection using gate valves, which are preferable on account of the free passage they afford for the water, their freedom in opening or closing and their tightness when closed.

SPRINKLING  
STANDPIPES

The accompanying figure shows a convenient arrangement for this purpose, which can be varied to meet conditions.

FIRE-PROTEC-  
TION SYSTEMS

For this purpose Chapman gate valves are preferred in every instance by Fire Underwriters and Insurance Inspectors.

**FIRE HYDRANTS**

GATE  
HYDRANTS

On account of their ease of opening and freedom from water hammer gate hydrants are much superior to those of any other type for fire protection work.

METAL AND  
RUBBER SEATS  
AND FACES

Those with metal seats and plug faces are generally used and are very reliable. Those with rubber-faced plugs and removable working parts are to be preferred where repairs to the hydrant would be expensive on account of paved streets or yards.

SIZE OF  
HYDRANTS

Hydrants of large size are preferable for fire protection service on account of the abundant supply of water with minimum loss of pressure which they furnish to the nozzles.

## HOSE NOZZLES

Ordinary practice is to fit each hydrant with two 2½-inch hose nozzles and where a steamer is used, to add an additional nozzle of larger size (4-inch or 4½-inch) for steamer suction.

## INDEPENDENT- VALVE NOZZLES

In order to obtain independent control of the several streams from a hydrant we make hydrants with an independent controlling valve on each hose nozzle, in addition to the main supply valve at the bottom of the hydrant. See Lists 81 and 83.

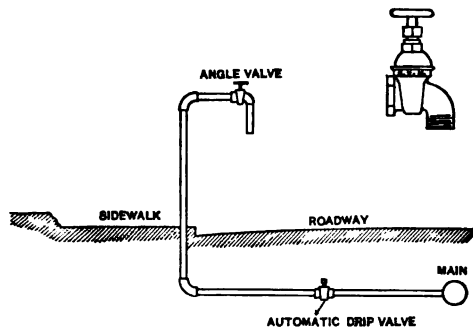


FIG. 690

SPRINKLING STAND-PIPE

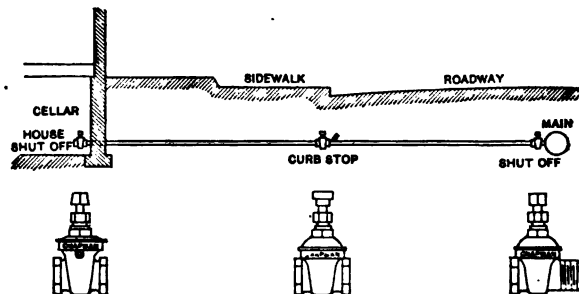


FIG. 691

SERVICE CONNECTION.

**CHAPMAN GATE VALVES, FIRE HYDRANTS, ETC., FOR WATER WORKS  
AND FIRE PROTECTION SYSTEMS**

LOCATION OF VALVE	KIND OF VALVE RECOMMENDED	SIZE OF VALVE	WORKING PRESSURE	KIND OF ENDS	LIST NUMBER IN CATALOGUE
Water Gates in Gate Chamber	Sluice Gates arranged for Rising Spindle Floor Stands				—List No. 84
Light Valves in Gate Chamber Pumping Engine Suction	Iron Body Valves with Babbitt Seats and Bronze Mountings	48-in. & smaller		Flange Ends Bell or Spigot Ends	—List No. 24 —List No. 25
Floor Stands for Sluice Gates and Valves	Rising Spindle Stand for Sluice Gates and Stationary Spindle Stand for Valves				—List No. 76
Supply & Force Main Valves Street Main or Distribution Valves	Iron Body Valves with Babbitt Seats and Bronze Mountings	2½-in. to 24-in., inclusive.	150 lbs. or less 150 lbs. to 175 lbs.	Flange or Screw Ends Bell or Spigot Ends Flange or Screw Ends Bell or Spigot Ends	—List No. 24 —List No. 25 —List No. 29 —List No. 30
		26-in. to 48 in., inclusive.	100 lbs. or less 100 lbs. to 150 lbs.	Flange or Screw Ends Bell or Spigot Ends Flange or Screw Ends Bell or Spigot Ends	—List No. 24 —List No. 25 —List No. 29 —List No. 30
Valves for Fire Protection Systems	Iron Body Valves with Babbitt Seats and Bronze Mountings	2-in. & smaller 2½-in. to 24-in., inclusive. 2½-in. to 24-in., inclusive.	200 lbs. or less 150 lbs. or less 150 lbs. to 175 lbs.	Flange or Screw Ends Flange or Screw Ends Bell or Spigot Ends Flange or Screw Ends Bell or Spigot Ends	—List No. 28 —List No. 24 —List No. 25 —List No. 29 —List No. 30
Indicator Post for Valves	Post fastened to Valve & arranged to show OPEN or SHUT according to position of gate				—List No. 75

# GATE VALVES, FIRE HYDRANTS, ETC., FOR WATER WORKS AND FIRE PROTECTION SYSTEMS—CONTINUED

LOCATION OF VALVE	KIND OF VALVE RECOMMENDED	SIZE OF VALVE	WORKING PRESSURE	KIND OF ENDS	LIST NUMBER IN CATALOGUE
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## SERVICE CONNECTIONS

Shut-off or Corporation Cock at Main	Bronze Valve with Babbitt Seats	2-in. & smaller	125 lbs. or less	Screw Ends	List No. 4
Curb Stop or Service Valve	Bronze Valve Iron Body Valve with Babbitt Seats and Bronze Mountings	2-in. & smaller 1-in. & larger	125 lbs. or less 200 lbs. or less	Screw Ends	List No. 1 Lists Nos. 28 and 29
Shut-Off in Cellar or Stop and Waste Valves	Bronze Automatic Drip Valve Iron Body Automatic Drip Valve	2-in. & smaller 1-in. & larger	125 lbs. or less 200 lbs. or less	Screw or Union Ends	List No. 9 List No. 27

## STREET SPRINKLING STANDPIPES OR WATER CART FILLERS

Shut-Off in Under-ground Supply Pipe	Bronze Automatic Drip Valve Iron Body Automatic Drip Valve	2-in. & smaller 1-in. & larger	125 lbs. or less 200 lbs. or less	Screw or Flange Ends Scr., Flg. or Bell Ends	List No. 9 List No. 27
Filling Valve	Bronze Angle Valve with Babbitt Seats Iron Body Angle Valve with Babbitt Seats	3-in. & smaller 1-in. & larger	125 lbs. or less 200 lbs. or less	Screw or Flange Ends	List No. 5 List No. 31

## AUTOMATIC SPRINKLER SYSTEMS, HOSE STANDPIPES, PUMP PIPING, ETC.

Automatic Sprinkler Systems Hose Standpipes Piping around Under-writer Pumps	Bronze Valve Iron Body Valves with Babbitt Seats and Bronze Mountings	Outside Screw or Indicator	2-in. & smaller 2½-in. & larger 1-in. & larger	125 lbs. or less 150 lbs. or less 200 lbs. or less	Screw or Flange Ends Screw or Flange Ends Screw or Flange Ends	List No. 1 List No. 24 Lists Nos. 28 and 29
Hose Valves	Bronze Valve with Bronze Seats Bronze Valve with Babbitt Seats		¾-in. to 4-in.	200 lbs. or less 150 lbs. or less	Screw, Flange or Special Ends	List No. 7 List No. 8



# **GATE VALVES, FIRE HYDRANTS, ETC., FOR WATER WORKS AND FIRE PROTECTION SYSTEMS—CONTINUED**

## **FIRE HYDRANTS**

LOCATION OF HYDRANT	KIND OF HYDRANT RECOMMENDED	SIZE	LIST NUMBER IN CATALOGUE
General Use	Post Hydrant with Babbitt Seat and Bronze Mountings	3 in., 4 in., 5 in. and 6 in.	LIST No. 80
High Pressure Systems, Mill Yards, etc.	Post Hydrant with Independent Valve on each Hose Nozzle—Babbitt Seats and Bronze Mountings	4 in., 5 in. and 6 in.	LIST No. 81
Paved Streets or Yards	Post Hydrant with Removable Rubber Faced Plug	4 in., 5 in. and 6 in.	LIST No. 82
Paved Streets or Yards, etc. With High Pressure Systems	Post Hydrant with Independent Valve on each Hose Nozzle—Removable Rubber Faced Plug.	4 in., 5 in. and 6 in.	LIST No. 83

**CHAPMAN GATE VALVES, FLANGES AND FLANGE UNIONS FOR STEAM AND HOT WATER  
HEATING AND VENTILATING SYSTEMS**

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**GATE VALVES**

Gate valves, of which we manufacture a full line especially adapted to this work, are the best for this purpose because they afford a straightway passage of full area for the water and steam, thereby reducing the loss of pressure from friction to a minimum; their shape also allows a perfect drainage of the system. Our gate valves are double-faced and are equally tight against pressure from either direction.

**BRONZE AND  
IRON VALVES**

We make these valves in all sizes, from one quarter-inch upward, in both bronze and iron. The bronze valves are suitable for radiator work and exposed piping where a neat external appearance is desirable; in the smaller sizes they are cheaper than the iron body valves. Iron body valves are stiffer and will stand more abuse than the bronze valves; they are suitable for use around the boilers, in the mains and risers and for radiator work in warehouses, factories, car-barns, indirect systems, etc.

**STRAIGHT,  
ANGLE AND  
CORNER  
VALVES**

We manufacture these valves in straight, angle and corner patterns, with or without ground joint union on either end; this enables the most satisfactory connections to be made to radiators, piping or coils with the least number of joints.

**OUTSIDE  
SCREW VALVES**

For all purposes except radiator work we recommend the outside screw valve wherever there is sufficient height for operating and where the projecting spindle is not liable to injury. In this type of valve the thread on the spindle is entirely outside the valve body where it can be inspected and oiled; the spindle rises through the wheel and so forms a perfect indicator to show the position of the plug or gate.

# INSIDE SCREW VALVES

The spindle of the inside screw valves revolves but does not rise and the valves require less height for operating than those with outside screw. These valves may be provided with indicator to show whether the valve is open or shut; see Section VI.

# RADIATOR VALVES

Our valves will be found particularly satisfactory for radiator work, especially on hot water systems. The stuffing-boxes are large and are fitted with driving gland; they are perfectly tight, an obvious advantage in radiator work. The wood wheels used on these valves are of special design and are entirely free from the usual tendency to split or become loose by shrinkage.

# END CONNECTIONS

For general use we recommend that valves be provided with flange ends, as they afford the greatest facilities for removal and repair and thereby prolong the life of the valve. For radiator work the best practice is to provide the valves with one screw and one union end.

# FLANGES AND FLANGE UNIONS

We make a full line of flanges to be used either in connection with our valves or as flange unions. They are carefully made of the best materials and are superior to any other make of flange or flange union on the market.

LOCATION OF VALVE	SIZE OF VALVE	KIND OF VALVE RECOMMENDED	LIST NUMBER IN CATALOGUE
Boiler Steam and Feed Water Piping	$\frac{1}{4}$ -in. to 2-in.	Bronze Valves	{ Straight Valves —List No. 1 { Angle Valves —List No. 5
Heating Mains, Risers and Branches	$\frac{1}{4}$ -in. to 2-in. { 2 $\frac{1}{4}$ -in. & larg. {	Iron Body Bronze Mounted Valves with Babbitt Seats Iron Body Bronze Mounted Valves with Babbitt Seats	{ Straight Valves —List No. 25 { Angle Valves —List No. 31 { Straight Valves —List No. 24 { Angle Valves —List No. 26
Radiator Valves	$\frac{1}{4}$ -in. & larger	Bronze Valves	{ Straight Valves —List No. 1 { Angle Valves —List No. 5 { Corner Valves —List No. 6
Flanges and Flange Unions	$\frac{1}{4}$ -in. & larger	Cast Iron Flanges, Faced, Threaded and Drilled	—List No. 65

## CHAPMAN GATE VALVES, FLANGES AND FLANGE UNIONS

FOR

### PLUMBING, DRAINAGE SYSTEMS AND FIRE-MAINS

---

#### GATE VALVES

Gate valves are unquestionably superior for this class of work ; they have a round straight-way passage of full area, thereby reducing the loss of pressure from friction to a minimum ; they are made with metal seats, unaffected by hot water, and therefore remain tight under continued service ; unlike valves of the ground key or plug-cock type, they will not stick, and open and close easily under all conditions ; they are double-seated and tight against pressure from either direction ; and they close in such a manner as to avoid destructive water hammer.

#### BRONZE AND IRON BODY VALVES

We make valves for this work in both bronze and iron, with screw, flange or bell ends, in all sizes from one-quarter inch upward and in straight, angle or bibb patterns. The bronze valves are suitable for use wherever a neat external appearance of the valve is desirable. The iron body valves are stiffer and will stand more abuse than the bronze valves ; they are suitable for supply pipes and general use.

#### INSIDE SCREW VALVES

Inside screw valves (with the addition of an indicator where it is desirable to know whether the valve is open or closed) give good results on this work.

#### OUTSIDE SCREW VALVES

Outside screw valves are recommended by the Fire Insurance Underwriters for use as shut-offs for fire-mains.

AUTOMATIC  
DRIP OR  
STOP AND  
WASTE VALVES

For this work, where it is necessary to drain the pipe line after the valve is closed, we make a gate valve with automatic drip, which takes the place of a stop and waste cock without any of its disadvantages.

# CHAPMAN GATE VALVES, FLANGES AND FLANGE UNIONS FOR PLUMBING, DRAINAGE SYSTEMS AND FIRE MAINS

LOCATION OF VALVE	SIZE OF VALVE	KIND OF VALVE RECOMMENDED	LIST NUMBER IN CATALOGUE	
Shut-off at Main Curb Stop	$\frac{1}{4}$ -in. to 2 in.	Bronze Valves	Screw or Flange Ends	—LIST No. 1
		Iron Body Bronze Mounted Valves with Babbitt Seats	Screw or Flange Ends	—LIST No. 25
Fixture Shut-offs General Uses	2 $\frac{1}{4}$ -in. & larger	Iron Body Bronze Mounted Valves with Babbitt Seats	Screw or Flange Ends Bell Ends	—LIST No. 24 —LIST No. 25
Stop-and-Waste or Emptying Valves	$\frac{3}{4}$ -in. & 1 in.*	Bronze Automatic Drip Valves	Screw or Flange Ends	—LIST No. 9
	1 $\frac{1}{4}$ -in. & larger	Iron Body Bronze Mounted Automatic Drip Valves	Screw, Flange or Bell Ends	—LIST No. 27
Angle Valves	$\frac{1}{4}$ -in. to 4 in.	Bronze Valves	Screw or Flange Ends	—LIST No. 5
	2 $\frac{1}{4}$ -in. & larger	Iron Body Bronze Mounted Valves with Babbitt Seats	Screw or Flange Ends	—LIST No. 25
Bibb Valves	$\frac{1}{4}$ -in. to 2 $\frac{1}{4}$ in.	Bronze Valves	Male, Female or Hose Ends	—LIST No. 10
Hose Valves	$\frac{1}{4}$ -in. to 4 in.	Bronze Valves	Screw or Flange Ends	—LIST No. 7

\*Larger sizes of Bronze Automatic Drip Valves for use with brass piping or where a neat exterior appearance is desirable, will be found in LIST No. 9.

## CHAPMAN GATE VALVES FOR STEAM POWER PLANTS

FOR

ELECTRIC LIGHTING AND RAILWAY SERVICE, MANUFACTURING ESTABLISHMENTS,

WATER WORKS PUMPING STATIONS, ETC.

---

### INSIDE SCREW AND OUTSIDE SCREW VALVES

The Inside Screw and Outside Screw Chapman valves are equally well made and either kind fulfills all the requirements of steam power plant service.

The Inside Screw valves are slightly lower in price than those with outside and require less room for operating.

The Outside Screw valves have the following advantages over those with inside screw, particularly for live steam and feed-water lines: the operating screw is entirely outside the valve body, where it can be inspected and oiled, thus ensuring easy operation of the plug; the rising spindle forms a simple, positive and accurate Indicator to show whether the valve is open or closed; the bronze seat valves have the Chapman Self-Packing Device, which allows the stuffing-box to be repacked under full pressure without closing the valve.

### FLANGE ENDS

For true economy we also advise that all valves be provided with flange ends for the following reason: A valve is a machine, subject to wear, and its working parts can be repaired from time to time and its life extended indefinitely, provided the body remains uninjured. The use of flange ends will allow the valve to be removed from the line and replaced as often as necessary without the injury to the body which is unavoidable in making up a screwed joint with taper thread. Bell End valves are sometimes used for low pressure water lines, such as feed pump suction, injection water and air pump discharge.

### BELL ENDS

### FLOOR STANDS, ETC.

Floor stands, indicators and gearing will be found fully described and illustrated in Section VI. of this catalogue.

# CHAPMAN GATE VALVES FOR STEAM POWER PLANTS

FOR

ELECTRIC LIGHTING AND RAILWAY SERVICE, MANUF'G. ESTABLISHMENTS, WATER WORKS PUMPING STATIONS, ETC.

LOCATION OF VALVE	SIZE OF VALVE	KIND OF VALVE RECOMMENDED	LIST NUMBER IN CATALOGUE
LOW PRESSURE VALVES			
Exhaust Steam	2-in. & smaller	Bronze Valves with Solid Bronze Seats	{ Straight Valves —List No. 1
Feed Pump Suction			{ Angle Valves —List No. 5
Exhaust and Low Pressure Drips	2½-in. & larger {	Iron Body Valves with Babbitt Seats and Bronze Mountings	{ Straight Valves * —List No. 24
Injection Water			{ Angle Valves —List No. 26
Air Pump Discharge	15-in.&smaller	Cast Iron Flanges—Faced, Threaded & Drilled	—List No. 68
Companion Flanges and Flange Unions			
PRESSURE VALVES FOR PLANTS CARRYING 80 POUNDS OR LESS WORKING PRESSURE			
Boiler Steam Stop Valves	2-in. & smaller	Bronze Valves with Solid Bronze Seats	{ Straight Valves —List No. 1
Cut-Out Valves in Steam Mains			{ Angle Valves —List No. 5
Engine Cut-Out Valves	2½-in. & larger {	Iron Body Valves with Babbitt Seats and Bronze Mountings	{ Straight Valves —List No. 29
Feed Water Piping			{ Angle Valves —List No. 31
Feed Pump and Air Pump Steam Valves	1½-in. to 4-in., { inclusive {	Iron Body Double Blow-Off Valves with Removable Bronze Seats	{ Straight Valves { List No. 45
Stoker, Fan and Hoisting Engine Steam Valves			{ Angle Valves {
High Pressure Drips	15-in.&smaller	Cast Iron Flanges—Faced, Threaded & Drilled	—List No. 68
Boiler Blow-Offs			
Companion Flanges and Flange Unions	15-in.&smaller	Cast Iron Flanges—Faced, Threaded & Drilled	—List No. 68

\* Bell End Valves for Low Pressure Water Lines, such as Feed Pump Suction, Injection Water and Air Pump Discharge, will be found in List No. 25.

# **GATE VALVES FOR STEAM POWER PLANTS—CONTINUED**

LOCATION OF VALVE	SIZE OF VALVE	KIND OF VALVE RECOMMENDED	LIST NUMBER IN CATALOGUE
<b>PRESSURE VALVES FOR PLANTS CARRYING FROM 80 TO 125 POUNDS WORKING PRESSURE</b>			
Boiler Steam Stop Valves	2-in. & smaller	Bronze Valves with Solid Bronze Seats	{ Straight Valves —List No. 1 { Angle Valves —List No. 5
Cut-Out Valves in Steam Mains			
Engine Cut-Out Valves			
Feed Water Piping			
Feed Pump and Air Pump Steam Valves	2½-in. & larger	Iron Body Valves with Removable Bronze Seats and Bronze Mountings	{ Straight Valves —List No. 41 { Angle Valves —List No. 42
Stoker, Fan and Hoisting Engine Steam Valves			
High Pressure Drips			
Boiler Blow-Offs	{ 1½-in. to 4-in., inclusive }	Iron Body Double Blow-Off Valves with Removable Bronze Seats	{ Straight Valves } List No. 45 { Angle Valves }
Receiver Piping in Multi-Cylinder Engines *	{ 2½-in. & larger }	Iron Body Valves with Babbitt Seats and Bronze Mountings	{ Straight Valves —List No. 29 { Angle Valves —List No. 31
Companion Flanges and Flange Unions	{ 15-in. & smaller }	Cast Iron Flanges—Faced, Threaded & Drilled	—List No. 68

\*If the receiver pressure exceeds 80 pounds, or if the steam is superheated so that the temperature exceeds 325 degrees Fahrenheit use the bronze-seated valves in Lists 41 and 42.



# GATE VALVES FOR STEAM POWER PLANTS—CONTINUED

LOCATION OF VALVE	SIZE OF VALVE	KIND OF VALVE RECOMMENDED	LIST NUMBER IN CATALOGUE
<b>PRESSURE VALVES FOR PLANTS CARRYING FROM 125 TO 250 POUNDS WORKING PRESSURE</b>			
Boiler Steam Stop Valves	2-in. & smaller	Bronze Valves with Solid Bronze Seats	{ Straight Valves —List No. 11 Angle Valves —List No. 13
Cut-Out Valves in Steam Mains			
Engine Cut-Out Valves			
Feed Water Piping			
Feed Pump and Air Pump Steam Valves	2½-in. & larger	Iron Body Valves with Removable Bronze Seats and Bronze Mountings	{ Straight Valves —List No. 43 Angle Valves —List No. 44
Stoker, Fan and Hoisting Engine Steam Valves			
High Pressure Drips			
Boiler Blow-Offs	1¼-in. to 4-in. inclusive	Iron Body Double Blow-Off Valves with Removable Bronze Seats	{ Straight Valves } List No. 45 Angle Valves
Receiver Piping in Multi-Cylinder Engines *	2½-in. & larger	Iron Body Valves with Babbitt Seats and Bronze Mountings	{ Straight Valves —List No. 2 Angle Valves —List No. 3
Companion Flanges and Flange Unions	15-in. & smaller	Cast Iron Flanges—Faced, Threaded & Drilled	—List No. 70

\*If the receiver pressure exceeds 80 pounds, or if the steam is superheated so that the temperature exceeds 325 degrees Fahrenheit use the bronze seated valves in Lists 41 and 42.

## CHAPMAN GATE VALVES, FLANGES AND FLANGE UNIONS

FOR

### MANUFACTURED AND NATURAL GAS

---

#### IRON BODY VALVES

For gas, oil and ammonia, where the temperature does not exceed 325 degrees Fahrenheit, we recommend our iron body valves with babbitt metal seats. Where the temperature exceeds 325 degrees Fahrenheit we recommend all-iron valves with iron seats.

#### HOT GAS VALVES

For extra high temperatures, such as are met in water-gas plants, we make a special iron valve with water-cooled seats and gate.

#### SMALL BRONZE AND IRON BODY VALVES

For lines requiring small valves, such as house-service connections, meter connections, etc., we recommend either bronze or iron body valves as being superior in every respect to the usual plug cock.

#### OUTSIDE SCREW VALVES

For positions where valves are not liable to external injury and where there is room for operating, as in gas-house work, holders, etc., we recommend the Outside Screw valve for the following reasons: The thread on the spindle is entirely outside the valve body, where it can be inspected and oiled, and is therefore unaffected by tar or other substances; the rising spindle forms a simple and positive indicator to show whether the valve is open or closed, and the position of the valve can be told by the sense of touch even in complete darkness.

#### INSIDE SCREW VALVES

#### INDICATOR

Inside screw valves are made in all sizes, have no external parts liable to injury, and require less room for operating than those with outside screw. They are suitable for street mains and similar positions. When desired, they are provided with INDICATOR, showing whether the valve is open or closed.

END  
CONNECTIONS In general, we recommend flange joints, particularly where valves or piping are liable to be removed. For the small sizes screw ends give good results if the valves are not likely to be removed from the line.

LOW  
PRESSURES Plain-faced flange joints will be found satisfactory for low pressure work. Tongued and grooved flange joints with lead gasket are recommended for high pressure work, the valves being made with male tongues or splines on the end flanges.

BELL ENDS For work with bell and spigot joints, valves with two bell ends should be used. We make these valves with grooved bell ends for calked lead joint or with plain bell ends for cement joint; the former are furnished unless otherwise ordered, as they serve for either lead or cement joint.

GEARING AND  
FLOOR STANDS Except for convenience in operating, it is not necessary to gear valves for this work. For full descriptions and illustrations of gearing, floor stands, etc., see Section VI.

# CHAPMAN GATE VALVES, FLANGES AND FLANGE UNIONS FOR GAS PLANTS

## MANUFACTURED OR NATURAL GAS

LOCATION OF VALVE	SIZE OF VALVE	KIND OF VALVE RECOMMENDED	LIST NUMBER IN CATALOGUE
Gas-House Work Holders Street Mains Distribution Systems, etc.	* } 1/4-in. to 48-in.	{ Iron Body Valve with Iron Mountings and Special Babbitt Metal Seats	{ Screw or Flange Ends { Straight Valves —List No. 51 Angle Valves —List No. 54 Bell Ends { Straight Valves —List No. 52
" Meter " Gas Valves for Mains	3-in. & larger	Iron Body Babbitt Seat Valves	Bell Ends   Straight Valves —List No. 53
House Service Connections Consumers' Meters, etc.	} 1/4-in. & larger {	{ Bronze Valves Iron Body Br'z M'td Babbitt Seat Valves	{ Scr. or Flg. { Straight Valves —List No. 1 Ends { " " —List No. 28
Hot Gas Valves	* } 1/4-in. & larger {	{ Iron Body Iron M'td Iron Seat Valves	{ Scr. or Flg. { Straight Valves —List No. 56 Ends { Angle Valves —List No. 57
High Pressure Natural Gas † " " Compressed Gas " " Oil and Naphtha	} 1/4-in. & larger {	{ Extra Heavy Semi-Steel Valves with Special Babbitt Metal Seats	{ Scr. or Flg. { Straight Valves —List No. 62 Ends { Angle Valves —List No. 64
Low Press're Oil and Naphtha*	} 1/4-in. & larger {	{ Semi-Steel Valves with Babbitt Seats	{ Scr. or Flg. { Straight Valves —List No. 60 Ends { Angle Valves —List No. 61
Steam and Water Valves	1/4-in. & larger	See Steam Power Plant Recommendations	

\*For Companion Flanges and Flange Unions to match these valves, see LIST NO. 71

†For Companion Flanges and Flange Unions to match these valves, see LIST NO. 72

## CHAPMAN GATE VALVES, FLANGES AND FLANGE UNIONS

FOR

### AMMONIA ICE-MAKING AND REFRIGERATING PLANTS, DIRECT AMMONIA EXPANSION OR BRINE SYSTEMS

---

#### AMMONIA JOINTS

The important feature of high pressure ammonia piping is the joints. In general, we recommend for this purpose flanged joints with tongued and grooved faces packed with lead gaskets. Valves for this work should always have male tongues or splines on the end flange faces. For small piping 2 inches and less in size, screw joints give good satisfaction where valves or piping are not liable to be removed. For close and rigid connections where the valves are liable to removal and for low pressure ammonia piping we recommend plain-faced flange joints with lead gasket.

#### AMMONIA FLANGES AND UNIONS

We recommend that valves be provided with the usual round flanges, to be used in connection with companion flanges of the same shape. For use in other parts of the piping we recommend either round or square flanges and unions.

#### BRINE PIPING

For this purpose we recommend our iron body bronze mounted valves with special babbitt metal seats, both on account of their extra strength and rigidity over bronze valves and on account of the absence of galvanic action (tending to destroy the pipe at the thread) which takes place between the usual bronze valve and iron pipe. Experience has shown that the iron valve is entirely unaffected by the brine.

#### BRINE JOINTS

For the smaller sizes, screw end connections and joints are much used and give good results. For the larger sizes flange joints with plain faces are preferable. Bell end connections with calked lead joints are frequently used on the brine mains of underground systems

# CHAPMAN GATE VALVES, FLANGES AND FLANGE UNIONS

FOR

## AMMONIA ICE-MAKING AND REFRIGERATING PLANTS—DIRECT AMMONIA EXPANSION OR BRINE SYSTEMS

LOCATION OF VALVE	SIZE OF VALVE	KIND OF VALVE RECOMMENDED	LIST NUMBER IN CATALOGUE
High Pres're Ammonia Piping	$\frac{1}{4}$ -in. & larger	Extra Heavy Semi-Steel Valves	<div> <div>Straight Valves</div> <div>Angle Valves</div> </div> <div> <div>—LIST No. 62</div> <div>—LIST No. 64</div> </div>
High Pressure Ammonia Flanges and Unions	$\frac{1}{4}$ -in. & larger	Extra Heavy Semi-Steel Flanges	<div> <div>Round Flanges and Unions</div> <div>Square Unions</div> </div> <div> <div>—LIST No. 72</div> <div>—LIST No. 73</div> </div>
Gage-Glass Valves	$\frac{1}{4}$ -in.	Extra Heavy Semi-Steel Special Angle Valves	—LIST No. 66
Light Pressure Ammonia Piping for Pressures not exceeding 100 lbs.	$\frac{1}{4}$ -in. & larger	Semi-Steel Valves	<div> <div>Straight Valves</div> <div>Angle Valves</div> </div> <div> <div>—LIST No. 60</div> <div>—LIST No. 61</div> </div>
Light Pressure Flanges and Unions for Pressures not exceeding 100 lbs.	$\frac{1}{4}$ -in. & larger	Semi-Steel Threaded Flanges	—LIST No. 71
Brine Valves	$\frac{1}{4}$ -in. to 2-in.	Iron Body Bronze Mounted Babbitt Seat Valves	<div> <div>Straight Valves</div> <div>Angle Valves</div> </div> <div> <div>—LIST No. 28</div> <div>—LIST No. 31</div> </div>
	$2\frac{1}{2}$ -in. & larger	Iron Body Bronze Mounted Babbitt Seat Valves	<div> <div>Straight Valves</div> <div>Angle Valves</div> </div> <div> <div>—LIST No. 24</div> <div>—LIST No. 26</div> </div>
	$\frac{1}{4}$ -in. to 3 in.	Bronze Valves	<div> <div>Straight Valves</div> <div>Angle Valves</div> </div> <div> <div>—LIST No. 1</div> <div>—LIST No. 5</div> </div>





SECTION XII.  
CHAPMAN GLOBE VALVES





## CHAPMAN IMPROVED GLOBE, ANGLE GLOBE AND CROSS VALVES

FOR

### ALL PURPOSES AND PRESSURES

To meet the demand for a strictly high class valve of the globe type, we have designed the valve shown by the accompanying drawings, Figs. 700, 701 and 702.

We are at work upon a complete line of patterns for these valves, which we are completing as rapidly as our regular work will allow, and are at present in position to furnish prices and dimensions for a number of sizes.

#### HOW MADE

The valves will be made in the various regular sizes; for all purposes and pressures, and of materials best adapted for the different substances to be held: such as Iron Body with Bronze Mountings and Renewable Bronze Seats for High Pressure Steam; Semi-Steel with special Babbitt Metal Seats or Disk Faces for Ammonia; All Bronze for Navy and Marine Work, etc.

#### AREA OF PASSAGE

One of the new and important features of these valves is the large area of the passage through the body, both under the diaphragm or seat at A and under the plug or disk at B, Fig. 700. In all cases the area of each of these passages is considerably greater than the area of the connecting pipes or port of the valve, so that the loss of pressure from friction is reduced to the minimum obtainable with the globe type of valve.

#### SEATS AND DISK FACES

The regular valves will be made with flat seats and the style of disk face shown in Fig. 700. We are also prepared to furnish them with beveled seats to conform to Naval or Marine requirements or to suit customers' preference. The seats will be **SOLID OR INTEGRAL SEATS**, as shown in Fig. 700; **SPECIAL BABBITT METAL SEATS**, as shown in Figs. 3 and 4; or **RENEWABLE BRONZE SEATS**, as shown in Fig. 5, according to the requirements of the service.

GUIDING OF  
PLUG

The plug or disk is guided by two ribs or splines in the body (G-G, Figs. 700, 701 and 702), which engage with grooves in the edges of the disk. This ensures a true vertical movement of the disk and still allows sufficient play to permit it to close tightly against its seat. This method of guiding also does away with the obstruction of the port by the usual extended spindle and radial guides.

OUTSIDE  
SCREW

The outside screw valves are made as shown in Figs. 700 to 702. The hand-wheel is STATIONARY VERTICALLY and revolves a yoke-nut N, held in the yoke Y, which gives the necessary movement to the spindle. The spindle rises without revolving. Its projection above the wheel forms an accurate indicator to show the position of the disk. The thread on the spindle is entirely outside the valve body, where it can be inspected and oiled.

SELF-PACKING  
FEATURE

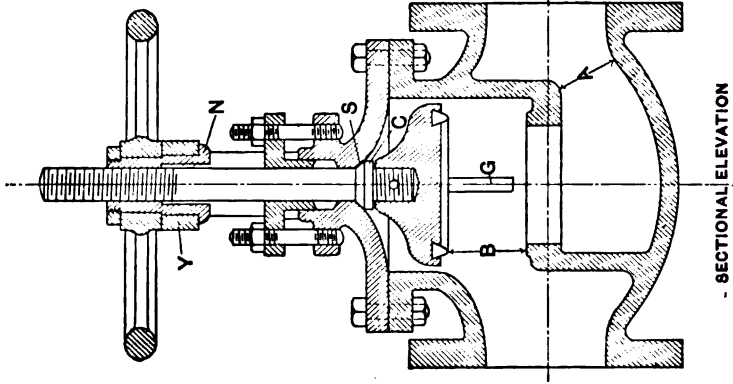
Outside screw valves for heavy pressure have the Chapman self-packing feature at the bottom of the stuffing-box, as shown in Fig. 700. This consists of a spherical collar C, forged or cast on the spindle, which closes against a finished beveled seat S in the valve cap WHEN THE VALVE IS WIDE OPEN, and allows the stuffing-box to be repacked under full pressure without closing the valve.

INSIDE  
SCREW

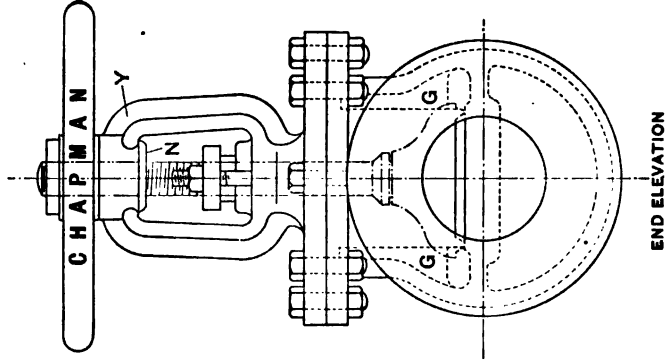
These valves will also be made with inside screw of improved design, if required.

CHAPMAN VALVE MANUFACTURING CO.

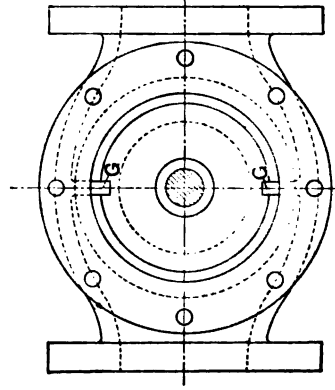
Jan. 1, 1900



SECTIONAL ELEVATION  
FIG. 700



END ELEVATION  
FIG. 701



TOP PLAN OF BODY  
WITH CAP REMOVED  
FIG. 702

CHAPMAN  
GLOBE,  
ANGLE GLOBE  
AND  
CROSS VALVES

Year	1990	1991	1992	1993
1990	1990	1991	1992	1993

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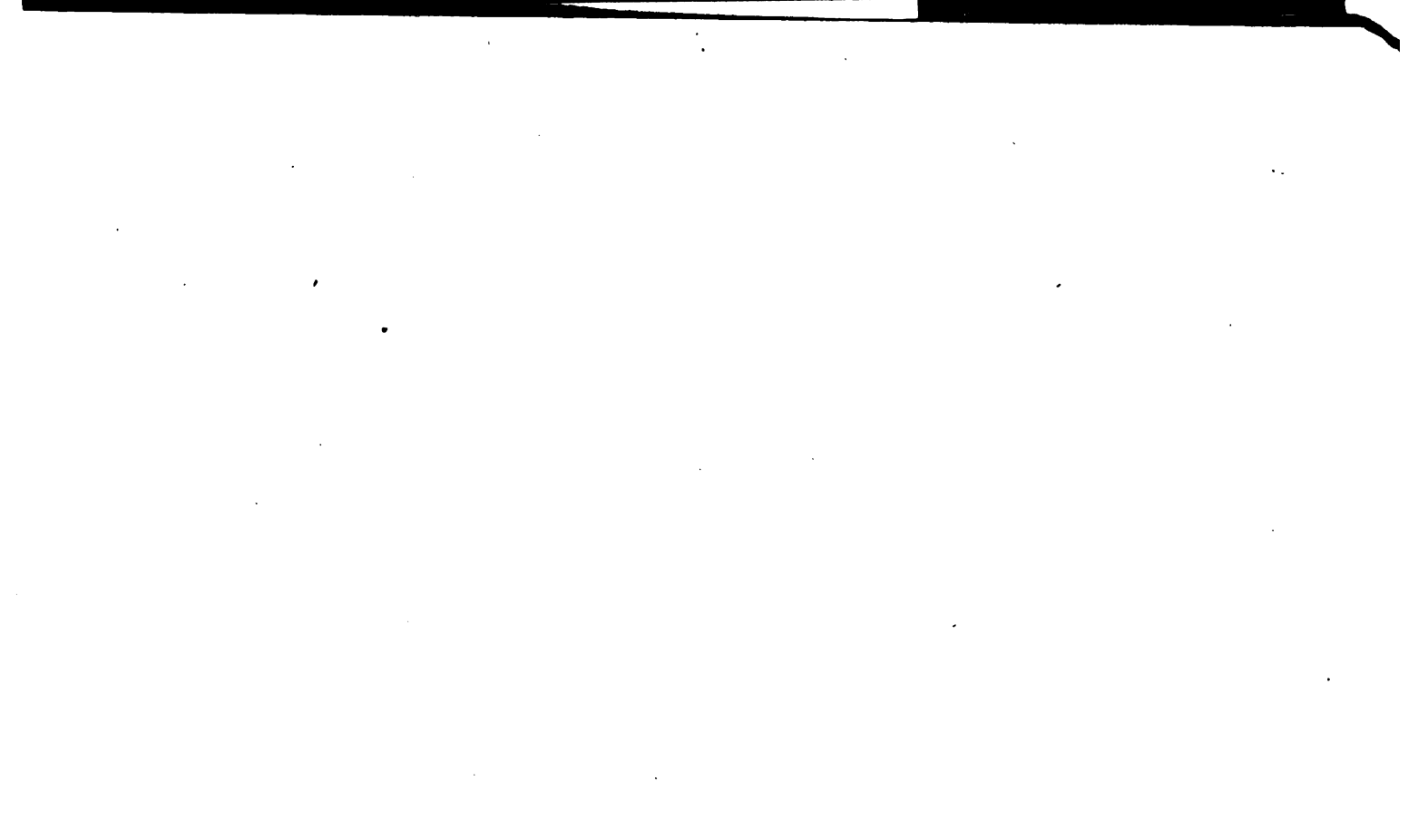


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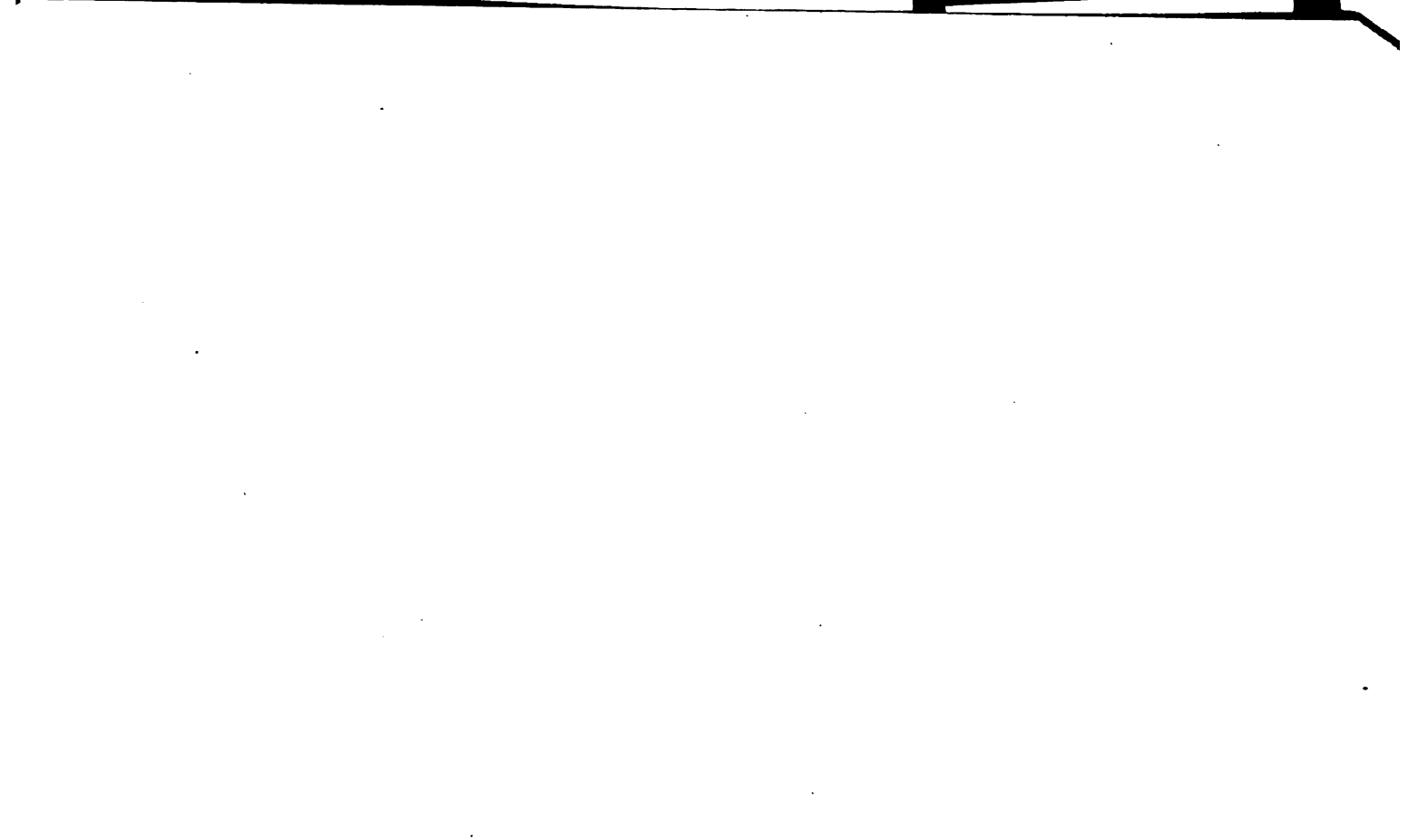
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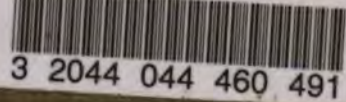






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